



Australian
National
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Centre for Applied Macroeconomic Analysis



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Crawford School
of Public Policy

College of
Asia and the Pacific



Message from the Director



2022 was another productive year in CAMA concerning many research activities - conferences, media participation, public engagement, working papers and publications.

Thank you to everyone who has submitted papers to the [CAMA Working Paper Series](#). CAMA published 75 working papers in 2022, and they have been well received by the economics profession, with many of them accepted for publication in top-ranking journals.

In September 2022, Professor Renee McKibbin stood down from the CAMA Shadow Board of Reserve Bank Australia (RBA) following her appointment as one of the three senior members of the RBA Review 2022-23. CAMA owes a debt of gratitude to Renee, who served the Shadow RBA Board for 11 years, from August 2011 to August 2022. Peter Tulip, Chief Economist at the Centre for Independent Studies, joined the CAMA Shadow RBA Board and brought to the Shadow Board his wealth of experience from the RBA and the US Fed.

In November 2022, I was invited to review and assess the RBNZ's recent monetary policy actions. The final report can be viewed [here](#).

CAMA created new channels and opportunities for our members to connect to policy makers, industry leaders and research communities on macroeconomic issues. In 2022 we launched the [Macroeconomic Blog](#), designed to inform and promote public and policy debates on macroeconomic and public policy issues. The Macroeconomics Blog published work from experts across various relevant disciplines and topics, with regular contributions from staff at the Centre for Applied Macroeconomic Analysis (CAMA).

In 2022 we welcomed 17 new research associates and two new doctoral student associates. We also welcomed Begoña Domínguez and Aarti Singh as directors of the Macroeconomic Theory program at CAMA. Thank you to Professor Bruce Preston for contributing to this program in the past years.

CAMA is a global network of researchers. CAMA's success draws directly on researchers' active participation – researchers who believe in excellence in research and public policy and the importance of contributing to public goods. I want to thank everyone in CAMA for their contributions and their support.

Warwick McKibbin

Director, Centre for Applied Macroeconomic Analysis

Contents

Centre for Applied Macroeconomic Analysis – Overview	1
Research Programs	2
Behavioural Macroeconomics and Complexity	2
Climate Change and Energy.....	3
Commodities and the Macroeconomy	4
COVID-19 and the Macroeconomy	4
Finance and the Macroeconomy	5
Globalisation and Trade.....	6
Growth, Demographics and Productivity	6
Macroeconomic Policy Frameworks.....	7
Macroeconomic Theory	8
Micro-Heterogeneity and Macroeconomic Performance	8
Model Uncertainty and Macro-Econometrics	9
Multi-Country Models and Methods.....	9
Open Economy Macroeconomics.....	10
CAMA RBA Shadow Board.....	10
Current Members	11
Past Members	15
Publications	18
CAMA Working Paper Series	18
Newsletters.....	23
CAMA Publications and Outputs	23
Other Publications.....	24
Media	29
Events.....	31
CAMA Conference, Workshop and Seminar.....	31
Other Conferences, Workshops and Seminars	32
CAMA International Visits	34
Academic Fellowship	34

Staff and Associates	35
Director	35
Deputy Director	36
Management Committee.....	36
Administrator	36
Advisory Board	37
Distinguished Associates	38
PhD Students	39
Program Directors	40
Doctoral Student Associates.....	41
Research Associates	41
CAMA Visitors	52
Funding.....	53
CAMA by Numbers	54
Contact	54

Centre for Applied Macroeconomic Analysis – Overview

The Centre for Applied Macroeconomic Analysis (CAMA) is located in the Crawford School of Public Policy at The Australian National University. It was established in 2003 to bring together economists working on applied macroeconomic and financial market issues throughout Australia and worldwide. CAMA aims to advance research and postgraduate training in applied macroeconomic and financial issues.

Professor Warwick McKibbin, the current Director, founded CAMA. The Deputy Director is Professor Ippei Fujiwara. Former Directors include Professor Renée Fry-McKibbin and Professor Shaun Vahey, and Deputy Directors include Professor Heather Anderson, Professor Mardi Dungey and Professor Renée Fry-McKibbin.



Research Programs

The centre's research activities are built around a series of research programs headed by a Program Director (or Directors). The Program Director is responsible for organising research in the area of the program. Proposals for new programs are welcome and will be considered by the executive committee. Suggestions should be directed to the CAMA Director. It is envisaged that programs will be active for three years, after which they are reviewed for activity, relevance and contributions to the academic and policy communities.

CAMA Research Programs	
Behavioural Macroeconomics and Complexity	
Climate Change and Energy	
Commodities and the Macroeconomy	
COVID-19 and the Macroeconomy	
Finance and the Macroeconomy	
Globalisation and Trade	
Growth, Demographics and Productivity	
Macroeconomic Policy Frameworks	
Macroeconomic Theory	
Micro-heterogeneity and Macroeconomic Performance	
Model Uncertainty and Macro-Econometrics	
Multi-country Models and Methods	
Open Economy Macroeconomics	

Behavioural Macroeconomics and Complexity

Directors	Corrado Di Guilmi and Timo Henckel
Research Advisor	Prof Dr Cars H Hommes
Research Associates	See the complete list under Staff and Associates - Research Associates

Behavioural macroeconomics seeks to refine our understanding of the discipline by accounting for relevant features of human behaviour that are absent in the standard economics framework. Instead of assuming a hyper-rational representative agent, the basis for analysis is empirically well-documented psychological and sociological factors such as cognitive bias, fairness concerns, herding, and social status. Acknowledging the growing econometric and experimental evidence that human behaviour often fails the predictions of the rational expectations and the full-information paradigm. This research program provides

an umbrella for all research dedicated to melding the insights from behavioural economics and psychology with modern macroeconomics in a sound and rigorous way.

An integral part of this research agenda is the problem of aggregation and the presence of agent heterogeneity, which considers the economy as an adaptive nonlinear network that generates complex, emergent behaviour. Salient features of this approach include dispersed interaction of agents, multiple levels of organisation and interaction, bounded rationality, continual adaptation of agents' behaviours, actions and strategies, deep, unquantifiable uncertainty, and persistent out-of-equilibrium dynamics.

The emphasis is both on theoretical and empirical models:

- Theoretical behavioural models will analyse the positive and normative macroeconomic implications of behavioural phenomena including, for example, prospect theory, hyperbolic discounting, adaptive learning, bounded rationality, habit/status concerns, money illusion, and endowment effects. Models of complexity analyse the properties of emergent behaviour, with a large emphasis on solution and simulation methods, including combinatorial mathematics, statistical mechanics and nonlinear computational algorithms. Many of these fall under the heading of agent-based models.
- Empirical models will use behavioural theory and complexity models to improve our statistical understanding and forecasting abilities of the macroeconomy and to analyse policy regimes and institutional features. These models are not only supposed to refine our understanding of individual choice but also help us understand and design better economic institutions and enhance overall welfare analysis.

The program seeks to foster a strong and growing network of researchers enthusiastic about behavioural macroeconomics and complexity. Activities will include workshops and conferences, collaboration with other CAMA research programs, and graduate courses and seminars on this topic.

Climate Change and Energy

Directors	Barbara Buchner and Warwick McKibbin
Research Associates	See the complete list under Staff and Associates - Research Associates

Rapid global economic growth, particularly in China and India, has important implications for global energy use as well as causing a rapid rise in greenhouse gas emissions with consequences for climate change. This program focuses on the importance of energy use and climate change and the associated policy responses on the macro-economy.

This program focuses on:

- methodologies for projecting long-term energy use and carbon dioxide emissions

- the relationship between macroeconomic performance and energy use
- the role of relative prices in energy demand and macroeconomic outcomes
- the macroeconomic consequences of alternative energy policies
- the macroeconomic implications of alternative climate change strategies and
- the design and impact of alternative emission permit trading systems.

Collaborative work in this project is linked to the ANU Climate Change Institute and the ANU Energy Change Institute.

The Climate Change and Energy program of CAMA is included in the Think Tank Map. <https://www.cmcc.it/climate-policy/think-tank-map-the-new-website>

Commodities and the Macroeconomy

Directors	Paul Cashin and Renée Fry-McKibbin
Research Associates	See the complete list under Staff and Associates - Research Associates

The implications of demand for resources by emerging market economies and understanding the unique features of commodity economies are currently issues for policymakers and investors. Emerging markets, in particular, are an important driver of the most recent commodity price cycle. This program seeks to understand commodity cycles, their financial market and macroeconomic effects, and the interactions between the three from both an emerging and developed country perspective.

The program focuses on:

- understanding trends and cycles in commodity markets
- currency, equity and commodity market linkages
- global business cycle linkages and the role of emerging markets
- oil price shocks and their transmission through the macroeconomy
- food price shocks and their pass through to the macroeconomy and poverty implications
- policy responses to relative price movements
- the macroeconomics of sovereign wealth funds.

COVID-19 and the Macroeconomy

Directors	Renée Fry-McKibbin and Joaquin Vespignani
Research Associates	See the complete list under Staff and Associates - Research Associates

The 2020 outbreak of COVID-19 was a truly global shock, unlike any seen before. The public health policies implemented to contain the virus have significantly disrupted the global

economy through both supply and demand channels, and have substantially affected global financial markets. Governments, central banks, and international financial organisations such as the IMF and the World Bank have stepped up to support the economy with fiscal and monetary stimulus, plus a substantial increase in the government debt burden. However, the unfolding of COVID-19 is greatly uncertain. Health and hence economic outcomes appear to be vastly different across countries and even within states within countries. What is certain is that the global economy has fundamentally changed.

The program aims to understand the global and country-specific financial market and macroeconomic impacts of the COVID-19 pandemic. The program will provide a forum to explore the new financial market and economic linkages between countries and the potential mechanisms of recovery from the crisis. The aim is to inform policymakers in both emerging and developed economies and to enhance academic research as the world seeks to recover from this crisis.

The program focusses on:

- The global macroeconomics consequences of the pandemic
- New channels of transmission of the international financial market and economic shocks
- Fiscal policy responses to the pandemic
- Conventional and unconventional monetary policy responses to the pandemic
- The interaction between fiscal and monetary policy in mitigating the effects of the pandemic
- Commodity prices and the coronavirus pandemic
- The COVID-19 and income and intergenerational inequality
- Macroeconomic effects of changes in agents' behaviour and modes of interaction
- Short-term and long-term impacts on the labour market

Finance and the Macroeconomy

Directors	Matthew Greenwood-Nimmo and Renée Fry-McKibbin
Research Associates	See the complete list under Staff and Associates - Research Associates

Financial market developments impact directly and indirectly on real economy outcomes, particularly in the short term, and developments in the macroeconomy affect financial markets, systems and institutions. This program brings together work on financial interactions with an assessment of the impact of markets and institutions on the economy and implications for policy. It includes assessment of broader trends in the macroeconomy and finance. Areas of investigation include:

- the role of international financial markets in transmitting shocks between economies, including during periods of financial stress
- regional and global financial cooperation and architecture, with a particular focus on East Asia
- financial markets, institutions and systems, including the integration of financial markets, electronic finance, harmonisation of financial systems and the nexus between finance and economic growth and development
- policy dialogue and the interaction between policy decisions, such as fiscal and monetary policy and structural policies, and financial development, including a focus on East Asia.

Globalisation and Trade

Directors	Martin H Davies and David Vines
Research Associates	See the complete list under Staff and Associates - Research Associates

The linkages between countries are influenced by their macroeconomic policies. These policies can be conducted so as to reduce risks and increase the likelihood of good outcomes.

The objective of this program is to undertake research into the design of policies in three areas. The first of these is the overall framework of macroeconomic policy, including the extent to which policy can influence exchange rates in a world of a high degree of capital mobility, and the integration of fiscal and monetary policy in the management of the economy. The second is the extent to which the financial system can be regulated so as to minimise the risk of currency and financial crises and to lessen the costs of such crises as occur. The third is the way in which the liberalisation of international trade can be managed so as to avoid the growth of preferential discrimination between countries and the growth of discriminatory trading blocs.

Research in this program will also be conducted into the connection between these areas: the extent to which trade liberalisation strategies demand a change to exchange rate strategies and the extent to which the need to minimise the risks of financial crises has implications for exchange rate strategies.

Growth, Demographics and Productivity

Directors	Bruce Chapman and Creina Day
Research Associates	See the complete list under Staff and Associates - Research Associates

The growth, demographics and productivity program promotes understanding of the economic growth processes for developing and developed countries. Growth in per capita output comprises growth in “three P’s”, productivity, participation and population, which provide the following key areas of focus:

How do research and development (R&D) and investment in human capital sustain economic growth in OECD countries? Can policies enhance long run growth prospects? What lessons and evidence relevant to developing countries does the experience of OECD countries provide? What role do institutions play in facilitating innovation and education-led growth? What are potential drags on economic growth in the form of demographic change, finite resources, trade and macroeconomic policies?

How do we understand changes in patterns and determinants of labour input? How do gender wage gaps, retiring cohorts, and immigration affect labour markets? What role does education play in labour productivity? Can we identify policies to promote labour force participation and productivity?

The world’s population doubled twice in the twentieth century, but is not expected to double once this century. What are the economic determinants and consequences of changes in fertility, life expectancy and demographic structure? Are these changes inevitable? How does demographic change benefit economies? What are the challenges facing ageing economies? What policies reconcile demographic change with productivity growth and employment?

Macroeconomic Policy Frameworks

Directors	Ippei Fujiwara and Toshitaka Sekine
Research Associates	See the complete list under Staff and Associates - Research Associates

Considerable progress has been made over the past 20 years in developing robust monetary and fiscal policy frameworks. For many countries, these have been aimed at maintaining low and stable inflation over the medium term, and public debt sustainability over the medium to long term. Associated implications and areas of importance have been less well developed.

This program brings together analytical and policy researchers interested in evaluating and advancing work in areas such as:

- the implications of medium-term fiscal and monetary policy frameworks for: the volatilities of output, interest rates and exchange rates; short-run stabilisation policies; intergenerational balance; financial stability; and external stability
- the role of governance procedures and associated institutional frameworks in sustaining the credibility of fiscal and monetary policy frameworks, including the

relative roles for policy coordination and operational independence, and the role of enforcement rules in fiscal policy frameworks

- macroeconomic policy frameworks for sustainable growth and employment and
- appropriate policy frameworks for common currency regimes.

Macroeconomic Theory

Directors	Begoña Domínguez and Aarti Singh
Research Associates	See the complete list under Staff and Associates - Research Associates

This program brings together various research agendas in the area of theoretical macroeconomics. The emphasis is on (i) the construction of macroeconomic models that have specific decision-theoretic foundations and equilibrium concepts; and/or (ii) the use of such models to understand observed economic phenomena, analyse policy regimes and other institutional features; and/or (iii) research that refines and expands the set of tools for undertaking research in (i) and (ii).

Research in this area includes equilibrium business cycle theories, growth theory, recursive policy games, recursive contract theory, dynamic public finance, international macroeconomics, expectations modelling and learning, sunspots and multiple equilibria in general equilibrium, search theoretic foundations of labour markets and monetary theory, and dynamic political economics.

The program's activities include:

- the annual Australasian Workshop in Macroeconomic Dynamics (WMD)
- Macroeconomics Study Group
- occasional advanced workshops and courses featuring experts in the relevant field.

Micro-Heterogeneity and Macroeconomic Performance

Directors	Dan Andrews and Gianna La Cava
Research Associates	See the complete list under Staff and Associates - Research Associates

The widespread heterogeneity in firms and households is crucial for understanding the propagation of macroeconomic shocks as well as the secular rise in inequality and the wage and productivity slowdowns. This program will aim to better understand micro-heterogeneity in an Australian context, using cutting-edge datasets on firms and households, as well as state-of-the-art econometric methods, with a view to building stronger micro-foundations for the Australian growth narrative.

This program focuses on:

- Generating key stylised facts on firm-level and worker-level heterogeneity in the Australian economy;
- Exploring the micro-drivers of Australia's pre-pandemic productivity slowdown, with a focus on the role of technology, resource reallocation and net entry;
- Understanding the role of firm and worker level heterogeneity in the propagation of the COVID-19 shock onto the macroeconomy and the post-pandemic recovery;
- Studying the links between the heterogeneity in household finances and the sensitivity of the aggregate economy to various shocks.

Model Uncertainty and Macro-Econometrics

Directors	James Morley and Benjamin Wong
Research Associates	See the complete list under Staff and Associates - Research Associates

This program focuses on the role of model uncertainty in empirical macroeconomics. This literature treats the 'true' model as an unobservable - an admission that has implications for many areas of macroeconomic analysis and has generated two distinct research sub-programs. One represents a renewed interest in model evaluation, comparison, selection and combinations when model misspecification is explicitly recognised. A second sub-program is based on accounting for model uncertainty explicitly in constructing predictive densities for objects of economic interest, conducting statistical inference and evaluating policies.

Multi-Country Models and Methods

Directors	Ippei Fujiwara and Warwick McKibbin
Research Associates	See the complete list under Staff and Associates - Research Associates

Countries are linked through trade flows and asset markets. The modelling of these interactions has been undertaken in large-scale model such as: computable general equilibrium models (for trade); large-scale macro-econometric models (aggregated trade and capital flows); and intertemporal general equilibrium models (trade detail and asset flows). There is also an emerging literature of smaller theoretical simulation models particularly of real business cycle and new Keynesian theories which attempt to understand global interdependence better. This program will bring together researchers interested in the linkages between countries and how these linkages impact on our understanding of economic outcomes in small open and large open economies.

Open Economy Macroeconomics

Directors	Martin Berka and Christoph Thoenissen
Research Advisor	Michael B Devereux, Charles Engel, and Maurice Obstfeld
Research Associates	See the complete list under Staff and Associates - Research Associates

The objective of the Open Economy Macroeconomics (OEM) program is to further the development and testing of optimization-based OEM frameworks. The main focuses of interest of the program are:

- international transmission mechanisms in OEM frameworks
- international relative prices and the international transmission of shocks
- cooperation and monetary and fiscal stabilisation policies in OEM frameworks.

CAMA RBA Shadow Board

On the first Tuesday of every month (except in January), the Board of the Reserve Bank of Australia (RBA) meets to decide on a target for the cash rate. This decision is highly significant for the wider economy and is therefore closely monitored by the financial markets.

The CAMA RBA Shadow Board consists of nine voting members and one non-voting chair, all distinguished macroeconomists, who offer their own policy recommendations one day before the official RBA decision.

A novel feature of the CAMA RBA Shadow Board is the requirement that members offer their policy recommendations probabilistically. When a central bank sets the preferred target cash rate, the decision necessarily constitutes a compromise, a careful balancing and weighting of all salient upside and downside risks. The imprecision stems from the uncertainties associated with real-time measurements, latent variables, model type, model parameters and the inherently unpredictable nature of the macroeconomy. Whatever rate the central bank sets, there is a considerable probability that a different rate would be more appropriate.

Nevertheless, most central banks provide little quantifiable information on the uncertainty confronting policymakers. Conventional central bank communication of interest rate setting does not formalise risk considerations and the probability of extreme events. The probability that the interest rate should be substantially different from the 'most preferred' target rate receives little attention. Central banks currently record formally neither the uncertainty experienced by individual board members, nor by the board as a whole.

Each member of the CAMA RBA Shadow Board records the uncertainty by giving probabilistic assessments of the appropriate (target) interest rate for each round. The higher

the percentage attached to a given interest rate, the more confident the member is that this rate is the appropriate target.

The aim of the CAMA RBA Shadow Board is to:

1. foster a lively and informed debate in the community about each interest rate decision and about macroeconomics more generally.
2. show how individual policymakers can quantify the uncertainty surrounding a preferred target cash rate and how these uncertainties may be aggregated to provide a probabilistic collective view.
3. generate data on probabilistic monetary policy decision-making that may be used in future research.

It is important to note that this project is not aimed at predicting RBA Board behaviour. In common with shadowing exercises in other countries (e.g., the US Shadow Open Market Committee), this is a normative exercise in stating the most suitable interest rate for current and expected economic conditions, not forecasting what the RBA will actually do.

The CAMA RBA Shadow Board (initially going by the name of PRO-POL) was conceived in August 2011 by Dr Timo Henckel, Professor Shaun Vahey, and Dr Elizabeth Wakerly, all of CAMA. Until June 2013 the logistics were handled by Mr Damien Hughes and Dr Elizabeth Wakerly.

Current Members



Sally M Auld is Chief Investment Officer at JBWere. Sally completed her Bachelor and Master degree in economics at Sydney University with First Class Honours and the University Medal. Sally went on to complete a Doctor of Philosophy in economics at Oxford University. She is currently Deputy Chair of the Council of The Women's College, within the University of Sydney, and sits on the Board of Equality Australia. Auld joined J.P. Morgan in September 2008 as head of fixed income and FX strategy for Australia and New Zealand. She was responsible for views on the Antipodean economic and policy outlook as well as strategic and tactical trade recommendations in Antipodean interest rate and FX markets. Previously, Auld was co-head of economics and interest rate research at ANZ and commenced her career as an interest rate strategist at Credit Suisse.



Begoña Domínguez is a Professor of Economics at the University of Queensland. She is founding member and current Vice-President of the Australasian Macroeconomic Society. She is a Research Associate of CAMA. She has held Associate Editorial positions at the *Journal of Economic Dynamics and Control* and at *New Zealand Economic Papers*. Her research specialisation is in macroeconomics and in particular she works on both fiscal policy and monetary economics. Begoña has published in international economics journals such as the *Journal of Monetary Economics*, the *Journal of Economic Theory*, and the *Review of Economic Dynamics*.



Timo Henckel (non-voting chair) is a Senior Lecturer in the Research School of Economics at ANU College of Business and Economics. He is also a CAMA Research Fellow and director of CAMA's "Behavioural Macroeconomics and Complexity" research program. His research spans the fields of behavioural economics, monetary economics, international macroeconomics, and experimental economics, with a particular focus on financial crises, bubbles and central bank policy. He appears frequently in the media and has written numerous policy briefs. Dr Henckel holds a PhD from the London School of Economics.



Sarah Hunter joined Oxford Economics in June 2010 as a member of the macroeconomics team. She currently leads the macroeconomics team within BIS Oxford Economics, and is responsible for the Australia Macro Service, our flagship economics subscription service which provides clients with forecasts and analysis of Australia's economy at the macro, industry and state level. As part of this service, Sarah takes a leading role in presenting the Australian and global outlook to clients in the region, and she is a regular commentator in the national press. Sarah is also responsible for the Asia-Pacific macro consulting team, who provide clients across the region with tailored macroeconomic analysis. During her time at Oxford Economics she has worked on a number of projects including estimating and forecasting household income by income band, enhancing and expanding the company's modelling of the energy sector, developing methodologies for financial institution stress testing scenarios, and developing quantitative models and analysis for due diligence reports for infrastructure asset transactions. Sarah has a degree in economics from the University of Cambridge and an MSc in Economics from the London School of Economics, which she passed with distinction. Prior to joining Oxford Economics she completed her PhD in Economics at the University of Oxford, where her thesis modelled the impact of World War I on Britain's position in the global economy.



Mariano Kulish received his PhD in economics from Boston College in 2005. His research interests include macroeconomics, monetary economics and applied econometrics with a focus on understanding the behaviour of economies undergoing structural changes. Mariano has developed new techniques to solve and estimate rational expectations models with structural changes and has applied them to policy-relevant settings, such as the recent period of monetary policy with zero interest rates, disinflation policies, and the impact of commodity price fluctuations in Australia. Mariano has published in international economics journals such as the *Review of Economics and Statistics*, the *Journal of Monetary Economics*, the *Journal of International Economics*, the *Journal of Applied Econometrics*, the *Journal of Economic Dynamics and Control*, and the *European Economic Review*.



Guay Lim is a Professorial Research Fellow at the Melbourne Institute of Applied Economics and Social Research and an Adjunct Professor at the Department of Economics, University of Melbourne. Her research interests are in quantitative macroeconomics and macroeconometrics and her papers have been published in major international journals. She has held visiting research positions at the IMF, ECB, RBNZ, Osaka University, Brown University, Georgetown University and Fordham University. Guay is also the head of the Macroeconomics Unit at the Melbourne Institute and they publish indicators of activity about the Australian economy on a regular basis.



Warwick McKibbin is a Distinguished Professor in the ANU Centre for Applied Macroeconomic Analysis (CAMA) at Crawford School of Public Policy at the Australian National University (ANU). He is also a Fellow of the Australian Academy of Social Sciences, a Distinguished Fellow of the Asia and Pacific Policy Society, a non-resident Senior Fellow at the Brookings Institution in Washington D.C and a Director of McKibbin Software Group Pty Ltd. Professor McKibbin was the founding Director of the ANU Centre for Applied Macroeconomic Analysis and founding Director of the ANU Research School of Economics. He was also a Professorial Fellow at the Lowy Institute for International Policy for a decade from 2003, where he was involved in its design and development. Professor McKibbin served for a decade on the Board of the Reserve Bank of Australia (the Australian equivalent of the Board of Governors of the US Federal Reserve) until July 2011. He has also served as a member of the Australian Prime Minister's Science, Engineering and Innovation Council and the Australian Prime Minister's Taskforce on Uranium Mining Processing and Nuclear Energy in Australia.



James Morley is a Professor of Macroeconomics at the University of Sydney. He received his PhD from the University of Washington in 1999 and was previously at Washington University in St. Louis and the University of New South Wales, most recently as Associate Dean (Research) of the UNSW Business School from 2014-2017. He is an Academic Fellow of the Reserve Bank of New Zealand and has been a visiting scholar at various policy institutions worldwide, including the Bank of Canada, Bank Negara Malaysia, and the Bank for International Settlements. He is a former President of the Society for Nonlinear Dynamics and Econometrics and is currently Co-Editor of the Economic Society of Australia's journal *The Economic Record*. His research focuses on the empirical analysis of business cycles, stabilisation policy, and sources of persistent changes in macroeconomic and financial conditions.



John Romalis studies international economics and macroeconomics. Romalis has published well-known papers on the determinants of international trade, and on the economic effects of tax and trade policy in journals such as the *American Economic Review*, the *Quarterly Journal of Economics*, the *Review of Economics and Statistics*, and the *Journal of the European Economic Association*. Romalis has three main current lines of research. He studies the trade and welfare implications of tariff reductions since the Uruguay Round of trade negotiations. A second line of research studies the causes of the collapse of international trade during the recent global recession. Finally, Romalis studies how firms engaged in international competition determine the quality and price of their products.

After completing degrees in economics and in law, Romalis worked negotiating contracts governing swaps and other derivatives for a commercial bank, and then moved to the economics research department in Australia's central bank. After completing his PhD in economics at the Massachusetts Institute of Technology, he joined the University of Chicago Booth faculty in 2001. John Romalis has also served as a Resident Scholar for the International Monetary Fund, has been a Faculty Research Fellow for the National Bureau of Economic Research, and had appointments at Princeton University and The Australian National University. In 2013 John Romalis moved to The University of Sydney where he was appointed the Sir Hermann Black Chair of Economics.



Peter Tulip is Chief Economist at the Centre for Independent Studies. He previously worked in the Research Department of the Reserve Bank of Australia. Before that he worked at the Federal Reserve Board of Governors, the OECD and the Commonwealth Treasury. His recent research focusses on housing and monetary policy. Peter has published in international economics journals such as the *Journal of Money, Credit and Banking*, the *International Journal of Forecasting*, the *International Journal of Central Banking* and the *B.E. Journal of Macroeconomics*. He has a PhD from the University of Pennsylvania.

Past Members



Paul Bloxham (member from August 2011-December 2020) is Chief Economist for HSBC in Australia and New Zealand. Prior to joining HSBC, Paul Bloxham was an economist within the Reserve Bank of Australia's Economic Analysis Department where he headed up the overseas economies and financial conditions sections, as well as working on domestic forecasting and prices. Bloxham has published a number of papers, including on household finances, asset prices and monetary policy. He is also a regular commentator on local and international business television and a frequent contributor of opinion editorials to the Australian newspapers. He holds a Master degree in public financial policy from the London School of Economics.



Mark Crosby (member from August 2011-December 2019) is Dean of the Global Master of Business Administration (GMBA) and interim Dean of the Global Bachelors of Business Administration (GBBA) effective 17 October 2011. Dr Crosby has held academic appointments at the University of Toronto, the University of New South Wales, and the University of Melbourne, where he was most recently the Associate Dean (International) at the Melbourne Business School. Dr Crosby has co-authored a widely-used textbook on macroeconomics, and publishes regularly in academic journals, contributes articles to the media, and has written a number of book chapters. Besides his university activities, Dr Crosby has worked or consulted widely for government and private enterprises including the World Bank, the Hong Kong Institute for Monetary Research, the Monetary Authority of Singapore, the South African Treasury, the Center for Strategic and Policy Studies in Brunei, the Commonwealth Bank of Australia, the Reserve Bank of New Zealand, and BHP Billiton. Most recently he completed a project on South Africa's current

account deficit and a project on diversifying Brunei's economy. He is a frequent guest on ABC TV and writes regularly for Australian newspapers.



Mardi Dungey (Member from August 2011-December 2018) was Professor of Economics and Finance at the University of Tasmania, a Senior Research Associate at the Centre for Financial Analysis and Policy at the University of Cambridge and Adjunct Professor at the Centre for Applied Macroeconomic Policy at The Australian National University. Mardi moved to the University of Tasmania in October 2008, from a position as the Deputy Director of the Centre for Financial Analysis and Policy at the University of Cambridge. Prior to that she has held academic positions at The Australian National University and La Trobe University. She also worked at Econtech Consulting Group and the Reserve Bank of Australia, and held visiting positions at the IMF, University of Cambridge, Princeton University, the Federal Reserve Bank of Atlanta and Australian and New Zealand Treasuries. She spoke regularly to international forums on her research and held a number of competitive grants. Mardi was a co-editor of the *Economic Record* and an Associate Editor of the *Journal of Applied Econometrics*, the *Journal of Asian Economics*, and the *Journal of Banking and Finance*.



Saul Eslake (Member from August 2011-June 2014) has been Chief Economist at Bank of America Merrill Lynch Australia since December 2011. He was previously a Program Director with the Grattan Institute (a non-aligned think tank affiliated with Melbourne University) and, between 1995 and 2009, Chief Economist at ANZ Bank. He is also a non-executive Director of Hydro Tasmania, and a member of the National Housing Supply Council and the Australian Statistics Advisory Council.



Renée Fry-McKibbin is a Professor of Economics in the Crawford School of Public Policy. She is the Co-Director of the Finance and Macroeconomy Program and the Commodities and the Macroeconomy within CAMA, and a research associate of the Research Project in Forecasting at George Washington University, the National Centre for Econometric Research (NCER) and the Norwegian Centre for Macroeconomic and Petroleum Analysis (CAMP). Renée was Associate Dean Research of the College of Asia & the Pacific at ANU from 2014 to May 2018. In 2012 she was appointed to the advisory board of the Australian Defence College (ADC). She is an associate editor for the *Journal of Banking and Finance* and *Finance Research Letters*, as well as a co-editor of the *Economic Record*. She has been a visiting scholar or consultant to the European Central

Bank, the Federal Reserve Bank of Atlanta, the International Monetary Fund, the Bank of England, the Department of Prime Minister and Cabinet, the Federal Treasury, AUSAID, the New Zealand Treasury and the Reserve Bank of New Zealand.



Bob Gregory (Member from August 2011-May 2018) Professor Gregory has held positions at the University of Melbourne, London School of Economics, Australian National University, Industries Assistance Commission, Northwestern University, and visiting positions at Harvard University, the University of Chicago and University College London.

He has been closely involved in the analysis and development of Australian economic policy; a member of the Board of Management at the Australian Institute of Family Studies, principal consultant in a series of government Aged Care Reviews, member of the committee that recommended the introduction of student income contingent loans, member of the Board of the Reserve Bank of Australia and the Australian Sciences and Technology Council. Professor Gregory has been awarded the Order of Australia Medal and has an honorary doctorate from the University of Melbourne.



Jeffrey Sheen is a Professor of Economics at Macquarie University. He has been on the faculty of the Universities of Manchester, Essex and Sydney, and has had a visiting appointment at the Reserve Bank of Australia. He has published his research in major international journals, and his interests span international economics, macroeconomics, labour and international finance. He obtained his PhD at the London School of Economics.



Mark Thirlwell (Member from August 2011-September 2013) is Director of International Economy Program and Fellow of G20 Studies Centre. Mark has been tracking global economic trends since he joined the Bank of England's International Divisions in 1990 where he worked as part of the Whitehall Economists Subgroup, coordinating the forecasting of major emerging markets across the Bank, Treasury, the FCO and other stakeholders. Mark subsequently joined J P Morgan as a Vice President in Economic Research with responsibility for Central Europe. Before joining

Lowy, he served as Senior Economist at Australia's Export Finance and Insurance Corporation, working on sovereign risk with a particular focus on East Asia.



Shaun Vahey (Member from August 2011-May 2013) is Professor at Warwick University and a Research Associate at CAMA (ANU) in the Model Uncertainty and Macro-Econometrics program. His current research interests include: empirical macro, time series econometrics with macro and financial variables, and some data science. He is a regular co-organiser of the Real-time Economics Conference which runs annually (usually) at FRB Philadelphia and other central banks since 2001. Shaun’s previous employers include Cambridge University (Christ’s College), Melbourne University, the Reserve Bank of New Zealand, Norges Bank and the Bank of England. His research has been

published in academic journals including the *American Economic Review*, the *Journal of Business and Economic Statistics*, the *Journal of Applied Econometrics* and the *Economic Journal*. Shaun has previously acted as a consultant with The Money Cloud, The Coefficiency Lab, the ACCC, Citadel Group, Rio Tinto, Norges Bank and RBNZ.

Shaun Vahey was a voting member from August-December 2011 and the inaugural chair until May 2013.

Publications



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06/2022	<u>The anatomy of small open economy trends</u>	Gortz C Theodoridis K Thoenissen C
05/2022	<u>Optimal parental leave subsidization with endogenous fertility and growth</u>	Yew SL Li SM Moslehi S
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03/2022	Welfare costs of exchange rate fluctuations: Evidence from the 1972 Okinawa reversion	Kano K Kano T
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Newsletters

CAMA published three newsletters in 2022. The newsletter is developed through the contribution of the CAMA members and it includes among other information about new members, projects, awards, publications, interviews, and events. Online copies of the newsletters can be found at the CAMA website [here](#).

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- Liu, W., and W.J. McKibbin (2022) “[Macroeconomic Impacts of Global Demographic Change: The Case of Australia](#)” Asian Economic papers, Volume 21, Issue 3: 78-111, October 2022.
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- Fernando R. and W. McKibbin (2022) “[Antimicrobial Resistance: Designing A Comprehensive Macroeconomic Modeling Strategy](#)” The Brookings Institution, Center on Regulation and Markets. The Brookings Institution, Washington DC, June 2022.

- Bertram C, Boirard A., Edmonds J., Fernando R., Gayle D., Hurst I., Liu W., McKibbin W., Payerols C., Richters O., Schets E., (2022) "[Running the NGFS Scenarios in G-Cubed: A Tale of Two Modelling Frameworks](#)", NGFS Occasional Paper, Banque de France, 17 June 2022.

Other Publications

Many CAMA working papers are published in major international journals or edited books. Publications in journals written by the CAMA research associates in 2022 include:

Behavioural Macroeconomics and Complexity program

- **Di Guilmi C** and Fujiwara Y (2022) 'Dual labor market, financial fragility, and deflation in an agent-based model of the Japanese macroeconomy', *Journal of Economic Behavior and Organization*, Volume 196, 2022, Pages 346-371.
- Neuner M, **Proaño CR** and Russo A (2022), '[Countercyclical Capital Buffers, Bank Concentration and Macrofinancial Stability in an Agent-Based Macro-Financial Framework](#)', *Advances in Complex Systems*, 25(2-3), 2240001.
- *Kotb N and **Proaño CR** (2022) '[Capital-Constrained Loan Creation, Household Stock Market Participation and Monetary Policy in a Behavioral New Keynesian Model](#)', *International Journal of Finance and Economics*, 28 June 2022.
- **Proaño CR**, Peña JC and Saalfeld T (2022) '[Inequality, Macroeconomic Performance and Political Polarization: An Panel Analysis of 20 Advanced Democracies](#)', *Review of Social Economy*, 19 Mar 2022.

Climate Change and Energy program

- **Mohaddes K**, Ng RNC, Pesaran MH, Raissi M and Yang J-C (2022) '[Climate change and economic activity: Evidence from US states](#)', *Oxford Open Economics*, odac010, 11 November 2022 (CAMA WP 10/2022).
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- Barbier EB and **Eskander S** (2022) 'Long-term impacts of the 1970 cyclone in Bangladesh'. *World Development* 152 (2022): 105793.
- **Eskander S** and Fankhauser S (2022) 'Income diversification and income inequality: household responses to the 2013 floods in Pakistan'. *Sustainability* 14, no. 1 (2022): 453. DOI 10.3390/su14010453.
- **Janda K**, Kristoufek L, and Zhang B (2022) 'Return and volatility spillovers between Chinese and US clean energy related stocks'. *Energy Economics* 2022, vol. 108, article number 105911. doi.org/10.1016/j.eneco.2022.105911.

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- Hou C, **Nguyen B** and **Zhang B** (2022) '[Real-time forecasting of the Australian macroeconomy using flexible Bayesian VARs](#)', *Journal of Forecasting*, 28 Sep 2022. doi.org/10.1002/for.2913.
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- **Souza R** and de Mattos L (2022) '[Macroeconomic effects of oil price shocks on an emerging market economy](#)', *Economic Change and Restructuring*, 13 Oct 2022.

COVID-19 and the Macroeconomy program

- Abeln B and **Jacobs J P.A.M.**(2022) '[COVID-19 and Seasonal Adjustment](#)', *Journal of Business Cycle Research*, 18, 159-169.

Finance and the Macroeconomy program

- **Kose MA**, Ohnsorge F and Ha J (2022) '[Today's inflation and the Great Inflation of the 1970s: Similarities and differences](#)', *VoxEU*, 30 Mar 2022.
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- Bezemer DJ, **Jacobs JPAM** and Rozite K (2022) 'Towards a financial cycle for the US, 1973-2014'. *North American Journal of Economics and Finance*, forthcoming. doi.org/10.1016/j.najef.2019.101023.
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Globalisation and Trade program

- **Akhtaruzzaman M** (2022), '[The Link Between Good Governance, Economic Development and Renewable Energy Investment: Evidence from Upper Middle-Income Countries](#)', *International Journal of Empirical Economics*, Vol. 01, No. 02, 2250005 (2022).

Growth, Demographics and Productivity program

- Chida A, Jain D, **Jha R**, Pathak R, and Rusell S (2022) 'Climate risk insurance in Pacific Small Island Developing States: possibilities, challenges and vulnerabilities—a comprehensive review', *Mitigation and Adaptation Strategies for Global Change*, doi.org/10.1007/s11027-022-10002-z.
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- Afridi F, **Bishnu M** and Mahajan K (2022) '[What Determines Women's Labor Supply? The Role of Home Productivity and Social Norms](#)', *Journal of Demographic Economics*, August 2022.
- Afridi F, **Bishnu M** and Mahajan K (2022) '[Gender and Mechanization: Evidence from Indian Agriculture](#)', *American Journal of Agricultural Economics*, April 2022.
- **Bishnu M**, **Kumru CS** and A. Nakornthab A (2022) '[Implications of Present-biased Preferences on Inheritance Taxes](#)', *Macroeconomic Dynamics*, May 2022.

Macroeconomic Theory program

- Candido O, **Maldonado WL** and Araujo C LM (2022) 'Private or Public Enterprises? Cost Inefficiency Limits: An Application to Water Supply Companies in Brazil', *The Empirical Economics Letters*, v. 21, n. 8. August 2022.
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Macroeconomic Policy Frameworks program

- Ghassibe M and **Zanetti F** (2022) '[State Dependence of Fiscal Multipliers: the Source of Fluctuations Matters](#)', *Journal of Monetary Economics* ([Journal of Monetary Economics Best Paper Award 2023](#)), CAMA WP 46/2022).
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Model Uncertainty and Macro-Econometrics program

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Open Economy Macroeconomics program

- **Kollmann R** (2022) 'A Tractable Overlapping Generations Structure for Quantitative DSGE Models', *Economics Letters*, forthcoming.
- **Hoffmann M and Okubo T** (2022) 'By a silken thread': Regional banking integration and credit reallocation during Japan's lost decade', *Journal of International Economics*. doi.org/10.1016/j.jinteco.2022.103579 (CAMA WP 36/2013).
- **Imbs J and Pauwels L** (2022) '[Measuring openness](#)', *VoxEU*, 25 Sep 2022.

Media

In 2022, the CAMA team and affiliates contributed to the public debate by participating in interviews with media, including the *Australian Financial Review*, *The Australian*, *ABC News*, *Sky News*, *The Guardian* and others.



Some articles and interviews in 2022 include:

- ◆ Renee Fry-McKibbin, [Meet the RBA Review Panel](#), CEDA, 24 November 2022
- ◆ Warwick McKibbin, [Peer Review RBNZ-Comments on In Retrospect: Monetary Policy in New Zealand 2017-22](#), Reserve Bank of New Zealand, 7 November 2022
- ◆ Roshen Fernando, Weifeng Liu and Warwick McKibbin, [Why climate policy scenarios are important, how to use them, and what has been learned](#), *Brookings*, 27 September 2022
- ◆ Bruce Chapman and Warwick McKibbin, [An HECS system is the fair way to pay for paid parental leave](#), *Australian Financial Review*, 4 September 2022
- ◆ Warwick McKibbin, [Comparisons with New Zealand's interest rates; Warwick McKibbin on the RBA and targeting inflation and Russia's economy](#), *ABC Radio National*, 4 August 2022

- ◆ Warwick McKibbin, [RBA must not repeat the mistakes of three decades ago](#), *Australian Financial Review*, 1 August 2022
- ◆ Warwick McKibbin, [Government unveils first Reserve Bank review since the 1990s](#), *ABC 7.30*, 21 July 2022
- ◆ Renee Fry-McKibbin, [Review of the Reserve Bank](#), *Media release, Ministers Treasury*, 20 July 2022
- ◆ Warwick McKibbin, [Australia can avoid recession with good policy choices](#), *Sky News*, 19 June 2022
- ◆ Warwick McKibbin, [Calls for a foreign eye on RBA](#), *ABC Radio National*, 31 May 2022
- ◆ Renee Fry-McKibbin and Warwick McKibbin, and others, [Open Letter: the RBA review should be independent of government](#), *The Conversation*, 30 May 2022
- ◆ Warwick McKibbin, [RBA insider on whether rates will rise](#), *ABC Radio National*, 3 May 2022
- ◆ Warwick McKibbin, [Why the RBA should lift interest rate to 0.5pc this week](#), *Australian Financial Review*, 2 May 2022
- ◆ Warwick McKibbin, [Alan Kohler special – What are the risks facing the RBA in raising interest rates?](#), *ABC 7.30*, 22 March 2022
- ◆ Warwick McKibbin, [The first economic modelling of coronavirus scenarios is grim for Australia, the world](#), *Business Daily Media*, 14 March 2022
- ◆ Warwick McKibbin, [Business Weekend, Sunday 13 March](#), *Sky News*, 13 March 2022
- ◆ Warwick McKibbin, [Reviewing Australia's monetary policy](#), *ABC Radio National*, 7 Feb 2022

CAMA published on Twitter ([@CAMacroAnalysis](#)) and contributed to the [Policy Forum of Asia and the Pacific Policy Society \(APPS\)](#). The *Policy Forum* is a public policy website devoted to Asia and the Pacific. It is located at Crawford School of Public Policy. The following articles were published by CAMA on APPS in 2022 :

- Warwick McKibbin, [RBA must not repeat the mistakes of three decades ago](#), 2 August 2022
- Warwick McKibbin, [Podcast: Back to basics – the economy and us](#), 4 July 2022
- Warwick McKibbin, [Why the Reserve Bank of Australia should lift the interest rate to 0.5 per cent this week](#), 3 May 2022

Other articles published by *APPS Policy Forum* can be found [here](#).

Events

CAMA actively promotes events such as workshops and conferences in Australia and internationally through sponsorship, organisation, and advertising. CAMA is a representative on the NBER East Asian Seminar in Economics (EASE) and the National Economic Research Organizations (NERO) network sponsored by the Organisation for Economic Cooperation and Development (OECD) in Paris.



CAMA Conference, Workshop and Seminar

The 9th Annual Workshop on the Global Economy: Climate Change

28 April 2022, Washington DC. Various speakers

This workshop brought together leading scholars to discuss the economic and geopolitical issues that could drive important outcomes from global decarbonization in the coming years.

Policy Dialogue on Decision Making for and in Old Age

10 October 2022, ANU. Various speakers

Co-hosted by CEPAR and the Centre for Applied Macroeconomic Analysis (CAMA) in the Crawford School of Public Policy at ANU, the 2022 Policy Dialogue attracted over 90 delegates from a variety of organisations across government, industry, academia and the community.

Economic Resilience: Global economic prospects - slowing growth, rising risks

17 February 2022, ANU. Speakers – Ayhan Kose and Garima Vasishta (World Bank)

The global recovery is set to decelerate amid diminished policy support, continued COVID-19 flare-ups, and lingering supply bottlenecks. In contrast to that in advanced economies, output in emerging market and developing economies will remain markedly below pre-pandemic trends in the near-term. The outlook is clouded by various downside risks,

including new COVID-19 outbreaks, the possibility of de-anchored inflation expectations, and financial stress in a context of record-high debt levels. These challenges underscore the importance of national policy responses and strengthened global cooperation to promote a green, resilient, and inclusive recovery path.

Other Conferences, Workshops and Seminars

- 12 Dec 2022 - the Council of Economic Advisers (CEA) in the US Government on G-CUBED Model and use of the model to understand macro-economic climate risks. Speaker – Warwick McKibbin
- 18 November 2022 - Public Sector Economists Conference ANU, *Longer-term structural transitions: Quantitative implications for the global economy*. Speaker – Warwick McKibbin
- 16-17 November 2022 – CEPAR Annual Workshop, *Stream 1: Macrodemographic Dynamics & Population Ageing Policy*, Sydney. Speaker – Warwick McKibbin
- 14-15 November 2022 – UBS Australasia Conference, *The Future Role of Central Banks*, Sydney. Speaker – Warwick McKibbin
- 1 Nov 2022 - Discussion via Zoom on the economic trajectory of countries in the Asia, with Andrew Parker, Senior Trade & Investment Commissioner, ASEAN, Investment NSW. Speaker – Warwick McKibbin
- 27 October 2022 – CFA Societies Australia, the 2022 Australian Investment Conference – Navigating New Horizons, *Insightful discussions and new opportunities for the investment industry*, Melbourne. Speaker – Warwick McKibbin
- 30 August 2022 – *MEG Economic Advisory Panel meeting* by Macroeconomic Group, Treasury, Speakers – Warwick McKibbin and Renee Fry-McKibbin
- August 2022 – Arndt-Corden Department of Economics Seminar Series by Crawford School of Public Policy, *Macroeconomic Consequences of COVID-19, Climate Change, and Antimicrobial Resistance, Canberra, Australia*. Speaker – Warwick McKibbin
- 4 August 2022 – CEPAR Advisory Board meeting, *Recent developments and applications of the G-Cubed model for demographic change, infectious diseases and climate risk*. Speaker – Warwick McKibbin
- 25 August 2022 – QUANTM Seminar Series, Monetary and Capital Markets Department of the International Monetary Fund, *Micro-founded global economic impacts of physical climate risks*, Speaker – Roshen Fernando
- 27 July 2022 – QUANTM Seminar Series, Monetary and Capital Markets Department of the International Monetary Fund, *Global economic impacts of climate shocks and changes in climate risk assessment*, Speaker – Roshen Fernando
- 22 July 2022 – CEPAR-UNSW Business School Forum-Connections: ESG, Pension Fund Investment, Public Policy and the Future, *Environmental, Social and Governance (ESG) in relation to pension investment, pension design and the macroeconomy*, Sydney. Speaker – Warwick McKibbin
- 10-13 July 2022 – Australian Conference of Economists (ACE): Economics in the New Normal, the Economics Society of Australia (ESA), *Global Macroeconomic Scenarios of the COVID-19 Pandemic: How Useful Were the Pre-Pandemic Scenarios?* Hobart Tasmania. Speaker – Warwick McKibbin

- May 2022 - European Central Bank, Training Course on Economic Modelling, *Recent Climate Change Research Using The G-Cubed Model*, online. Speaker – Warwick McKibbin.
- May 2022 – Bank of England Chief Economists Workshop, *Practical developments in modelling the impact of climate on the macroeconomy*, online. Speaker – Warwick McKibbin
- May 2022 - Seminar on Climate Risk by World Bank, *Recent Climate Change Research Using The G-Cubed Model*, online. Speaker -Warwick McKibbin
- May 2022 – International Monetary Fund officials (Augustus Panton and Florence Jaumotte), *Recent Climate Change Research Using The G-Cubed Model*, Washington DC. Speaker -Warwick McKibbin
- May 2022 – Virtual Seminar on Climate Economics by Brookings Institution, *Global Economic Impacts of Climate Shocks, Climate Policy and Changes in Climate Risk Assessment*, online. Speaker – Warwick McKibbin
- April 2022 – Conexus Financials, Credit and Fixed Income Forum, *How Transitioning to Net Zero Could Change Central Bank Behaviour*, Melbourne. Speaker – Warwick McKibbin
- April 2022 – NYU Volatility and Risk Institute Seminar, *Global Economic Impacts of Climate Shocks, Climate Policy and Changes in Climate Risk Assessment*, online. Speaker – Warwick McKibbin
- April 2022 – Central Bank of Mexico, *Recent Climate Change Research Using The G-Cubed Model*, online. Speaker – Warwick McKibbin
- April 2022 – Central Bank of Mexico, *Recent Climate Change Research Using The G-Cubed Model*, online. Speaker – Warwick McKibbin
- March 2022 – Commonwealth Treasury, *Presentation of Model Results*, online. Speaker – Warwick McKibbin
- March 2022 – Australian Bankers Association, *APRA Climate Vulnerability Assessment*. Online. Speaker – Warwick McKibbin
- March 2022 – Dennis Family Corporation, *Global Economic Outlook*, online. Speaker – Warwick McKibbin
- March 2022 – NYU Stern Roundtable on Climate and Macroeconomy, *Global Economic Impacts of Climate Shocks, Climate Policy and Changes in Climate Risk Assessment*, online. Speaker – Warwick McKibbin
- 8 March 2022 – Calenda, [Quo Vadis? Monetary and fiscal interactions revisited](#), *Climate Policies and Monetary Policies in the Euro Area / Mitigating Climate Change: Growth-Friendly Policies to Achieve Net Zero Emissions by 2050*, online. Speaker – Warwick McKibbin
- February 2022 – International Monetary Fund Seminar on Trade, *Climate Change and External Adjustment*, online. Speaker -Warwick McKibbin
- February 2022 – Webinar at FED: Board of Governors of the Federal Reserve System, *Recent Climate Change Research Using The G-Cubed Model*, online. Speaker – Warwick McKibbin

CAMA International Visits

- Warwick McKibbin and Renee Fry-McKibbin visited Brookings Institution USA on 13 – 19 Sep 2022.
- Warwick McKibbin and Renee Fry-McKibbin visits International Monetary Fund (IMF), USA from 21 April to 18 May 2022.
- Warwick McKibbin visited New York University, USA on 30 April 2022.

Academic Fellowship

Warwick McKibbin was appointed as [Inaugural Senior academic Fellow](#) at the e61 Institute.

Staff and Associates

Director



Professor Warwick McKibbin, AO is a Distinguished Professor of Economics & Public Policy and Director of the Centre for Applied Macroeconomic Analysis (CAMA) in the Crawford School of Public Policy at the Australian National University (ANU). He is also a Fellow of the Australian Academy of Social Sciences; a Distinguished Fellow of the Asia and Pacific Policy

Society; a non-resident Senior Fellow at the Brookings Institution in Washington D.C (where he is co-Director of the Climate and Energy Economics Project), and Director of McKibbin Software Group Pty Ltd. Professor McKibbin was foundation Director of the ANU Centre for Applied Macroeconomic Analysis and foundation Director of the ANU Research School of Economics. He was also a Professorial Fellow at the Lowy Institute for International Policy for a decade from 2003, where he was involved in its design and development. Professor McKibbin served for a decade on the Board of the Reserve Bank of Australia (the Australian equivalent of the Board of Governors of the US Federal Reserve) until July 2011. He has also served as a member of the Australian Prime Minister's Science, Engineering and Innovation Council, and on the Australian Prime Minister's Taskforce on Uranium Mining Processing and Nuclear Energy in Australia.

Prof McKibbin received his B.Com (Honours 1) and University Medal from the University of NSW (1980) and his AM (1984) and a PhD (1986) from Harvard University. He was awarded the Centenary Medal in 2003, "For Service to Australian Society through Economic Policy and Tertiary Education" and made an Officer of the Order of Australia in 2016.

Professor McKibbin is internationally renowned for his contributions to global economic modelling. Professor McKibbin has published more than 250 academic papers and is a regular commentator in the popular press. He has authored/ edited five books, including "Climate Change Policy after Kyoto: A Blueprint for a Realistic Approach" with Professor Peter Wilcoxon of Syracuse University. He has been a consultant for many international agencies and a range of governments on macroeconomic policy, international trade and finance, greenhouse policy issues, global demographic change and the economic cost of pandemics.

Deputy Director



Ippei Fujiwara is Professor of Macroeconomics at Crawford School of Public Policy, associate editor of *Japan and the World Economy*, research associate at the Globalization and Monetary Policy Institute, Federal Reserve Bank of Dallas, co-director for Australia-Japan Research Centre, and the deputy director at the Centre for Applied Macroeconomic Analysis (CAMA). He completed his DPhil in economics at the University of Oxford (Nuffield), and a PhD in Applied Economics at Osaka University. Professor Fujiwara worked for the Bank of Japan for 18 years before joining Crawford School of Public Policy where his research has focused on international finance, monetary economics and macroeconomics. His recent publications are in *Journal of Applied Econometrics*, *Journal of Monetary Economics*, *Journal of International Money and Finance*, *Journal of Money Credit and Banking*, *Journal of Economic Dynamics and Control* and *Macroeconomic Dynamics*.

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Thomas Wangi

Timothy Watson

PhD Internship

PhD Scholar, **Roshen Fernando** undertook the 2022 Fund Internship at the Monetary and Capital Markets Department of the International Monetary Fund (IMF) from 6 June 2022 to 26 August 2022.

Submission of PhD Thesis

PhD candidate, **Tsendsuren (Tsegi) Batsuuri** submitted her PhD for examination in July 2022. Her research has focused on several research questions: (1) How does demographic change and population ageing affect carbon emissions when capital intensity and emissions intensity across sectors are different? (2) How does asymmetric demographic change across countries affect global and country emissions when countries are linked through trade and finance? (3) How does the interaction of different pension schemes with different demographic transition affect global emissions? (4) Can price based metrics be useful in comparing country efforts when there are spill-over impacts due to demographic change?

Title: **The impact of demographic change in Asia on macroeconomic and environmental outcomes**

Supervisor: Professor Warwick McKibbin

Co-supervisors: Professor Creina Day and Dr Larry Liu

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Research Associates

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Hilde C. Bjørnland	Norwegian School of Management	Finance and the Macroeconomy program, Commodities and the Macroeconomy program, and COVID-19 and the Macroeconomy
Steven Bond-Smith	University of Hawai'i at Mānoa	Globalisation and Trade program, and Macroeconomic Theory program
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Robert Breunig	The Australian National University	Growth, Demographics and Productivity program, and COVID-19 and the Macroeconomy
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Yoosoon Chang	Indiana University	Micro-Heterogeneity and Macroeconomic Performance program, and Finance and the Macroeconomy program
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Mariarosaria Comunale	International Monetary Fund	Open Economy Macroeconomics program, and COVID-19 and the Macroeconomy
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R Quentin Grafton	The Australian National University	COVID-19 and the Macroeconomy program, and Climate Change and Energy program
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Qazi Haque	University of Adelaide	Macroeconomic Theory program
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Luke Hartigan	The University of Sydney	Finance and the Macroeconomy program, and Model Uncertainty and Macro-Econometrics
Iftekhar Hasan	The Fordham University	Finance and the Macroeconomy program
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David Haugh	OECD	Macroeconomic Policy Frameworks program
Yasuo Hirose	Keio University	Macroeconomic Policy Frameworks program
Viktorija Hnatkovska	University of British Columbia	Open Economy Macroeconomics program
Mathias Hoffmann	University of Zurich	Open Economy Macroeconomics program, and COVID-19 and the Macroeconomy
Mathias Hoffmann	Deutsche Bundesbank	Open Economy Macroeconomics program
Cody Yu-Ling Hsiao	Macau University of Science and Technology	Finance and the Macroeconomy program, and COVID-19 and the Macroeconomy
Stan Hurn	Queensland University of Technology	Finance and the Macroeconomy program
Punnoose (Reuben) Jacob	Reserve Bank of New Zealand	Open Economy Macroeconomics program
Jan P.A.M. Jacobs	University of Groningen	Finance and the Macroeconomy program, and COVID-19 and the Macroeconomy
Karel Janda	Prague University of Economics and Business	Climate Change and Energy program
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Frank Jotzo	The Australian National University	Climate Change and Energy program
Benoit Julien	University of New South Wales	Macroeconomic Theory program

Timothy Kam	The Australian National University	Macroeconomic Theory program
Gunes Kamber	Bank for International Settlements	Open Economy Macroeconomics program
Takashi Kano	Hitotsubashi University	Open Economy Macroeconomics program
Greg Kaplan	University of Chicago	Micro-Heterogeneity and Macroeconomic Performance program
Özer Karagedikli	Reserve Bank of New Zealand	Finance and the Macroeconomy program, and Model Uncertainty and Macro-Econometrics
Anil Savio Kavuri	Loughborough University	Finance and the Macroeconomy program, and COVID-19 and the Macroeconomy
Jinill Kim	Korea University	Macroeconomic Policy Frameworks program
Ian King	University of Queensland	Macroeconomic Theory program
Alan Kirman	Aix-Marseille University	Behavioural Macroeconomics and Complexity program
Sagiri Kitao	The University of Tokyo	Macroeconomic Theory program
Paul Kitney	The Australian National University	Finance and the Macroeconomy program
Wee Chian Koh	The World Bank	Finance and the Macroeconomy program, Commodities and the Macroeconomy program, and COVID-19 and the Macroeconomy
Robert Kollmann	Université Libre de Bruxelles	Open Economy Macroeconomics program, and COVID-19 and the Macroeconomy
Bonsoo Koo	Monash University	Finance and the Macroeconomy program, and Model Uncertainty and Macro-Econometrics
Ayhan Kose	The World Bank	Finance and the Macroeconomy program
Leo Krippner	The Australian National University	Finance and the Macroeconomy program
George Kudrna	University of New South Wales	Growth, Demographics and Productivity program, and Micro-Heterogeneity and Macroeconomic Performance program
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Shuyun May Li	University of Melbourne	Macroeconomic Theory program
Mengheng Li	University of Technology Sydney	Model Uncertainty and Macro-Econometrics
Yin Liao	Macquarie University	Finance and the Macroeconomy program
Jan Libich	La Trobe University	Macroeconomic Policy Frameworks program
Denny Lie	The University of Sydney	Macroeconomic Policy Frameworks program
Philip Liu	International Monetary Fund	Multi-Country Models and Methods program, and Macroeconomic Theory program
Yingying Lu	CSIRO	Climate Change and Energy program, and Growth, Demographics and Productivity program
Thomas Lubik	Federal Reserve Bank of Richmond	Macroeconomic Theory program
Jakob Madsen	Monash University	Growth, Demographics and Productivity program
Wilfredo Maldonado	University of São Paulo	Macroeconomic Theory program, and COVID-19 and the Macroeconomy
Pym Manopimoke	Bank of Thailand	Model Uncertainty and Macro-Econometrics
Vance Martin	University of Melbourne	Finance and the Macroeconomy program
Ian McDonald	University of Melbourne	Behavioural Macroeconomics and Complexity program
Warwick McKibbin	The Australian National University	Growth, Demographics and Productivity program, and COVID-19 and the Macroeconomy
Kate McKinnon	Vanguard	Finance and the Macroeconomy program
Roland Meeks	International Monetary Fund	Finance and the Macroeconomy program
Gordon Menzies	University of Technology, Sydney	Behavioural Macroeconomics and Complexity program, and Multi-Country Models and Methods program
George Milunovich	Macquarie University	Finance and the Macroeconomy program
Jorge Miranda-Pinto	The University of Queensland	Macroeconomic Policy Frameworks program, and Macroeconomic Theory program
James Mitchell	Federal Reserve Bank of Cleveland	Model Uncertainty and Macro-Econometrics

Kamiar Mohaddes	University of Cambridge	Commodities and the Macroeconomy program, and COVID-19 and the Macroeconomy
Masayuki Morikawa	METI - Japan	Growth, Demographics and Productivity program
James Morley	The University of Sydney	COVID-19 and the Macroeconomy
Adele C. Morris	The Brookings Institute	Climate Change and Energy program
Solmaz Moslehi	Monash University	Macroeconomic Policy Frameworks program, Growth, Demographics and Productivity program, and Macroeconomic Theory program
Anella Munro	Asia School of Business - Malaysia	Finance and the Macroeconomy program, and COVID-19 and the Macroeconomy
Christopher Murphy	The Australian National University	COVID-19 and the Macroeconomy
James Nason	NC State University	Model Uncertainty and Macro-Econometrics, and COVID-19 and the Macroeconomy
Rabindra Nepal	University of Wollongong	Climate Change and Energy program
Bao Nguyen	University of Tasmania	Commodities and the Macroeconomy program
Charles Nolan	University of Glasgow	Open Economy Macroeconomics program
Sylwia Nowak	International Monetary Fund	Finance and the Macroeconomy program
Masao Ogaki	Keio University	Behavioural Macroeconomics and Complexity program
Franziska Ohnsorge	The World Bank	Open Economy Macroeconomics program
Tatsuyoshi Okimoto	The Australian National University	Finance and the Macroeconomy program, and Commodities and the Macroeconomy program
Toshihiro Okubo	Keio University	Globalisation and Trade program
Chiara Oldani	University of Viterbo La Tuscia	Finance and the Macroeconomy program, and COVID-19 and the Macroeconomy
Denise Osborn	University of Manchester	Model Uncertainty and Macro-Econometrics
Murat Özbilgin	New Zealand Treasury	Macroeconomic Policy Frameworks program
Gulcin Ozkan	Kings College London	Open Economy Macroeconomics program, and COVID-19 and the Macroeconomy
Alessia Paccagnini	University College Dublin	Model Uncertainty and Macro-Econometrics, and COVID-19 and the Macroeconomy
Augustus Panton	International Monetary Fund	Climate Change and Energy program
Woong Yong Park	Seoul National University	Model Uncertainty and Macro-Econometrics

Laurent Pauwels	The University of Sydney	Open Economy Macroeconomics program, Model Uncertainty and Macro-Econometrics, and COVID-19 and the Macroeconomy
Oscar Pavlov	University of Tasmania	Macroeconomic Theory program
Jack Pezzey	The Australian National University	Climate Change and Energy program, and Growth, Demographics and Productivity program
Victor Pontines	South East Asian Central Banks (SEACEN)	Finance and the Macroeconomy program, and COVID-19 and the Macroeconomy
Aubrey Poon	University of Strathclyde	Model Uncertainty and Macro-Econometrics
Phitawat Poonpolkul	Bank of Thailand	Growth, Demographics and Productivity program
Bruce Preston	University of Melbourne	Macroeconomic Theory program, and COVID-19 and the Macroeconomy
Simon Price	University of Essex	Finance and the Macroeconomy program, and Model Uncertainty and Macro-Econometrics
Christian R Proaño	Otto-Friedrich-Universität Bamberg	Behavioural Macroeconomics and Complexity program
Mala Valliammai Raghavan	University of Tasmania	Finance and the Macroeconomy program, and Commodities and the Macroeconomy program
Ronald A. Ratti	University of Missouri	Finance and the Macroeconomy program
Francesco Ravazzolo	Free University of Bozen/Bolzano	Model Uncertainty and Macro-Econometrics, and COVID-19 and the Macroeconomy
Eli Remolona	Asia School of Business - Malaysia	Finance and the Macroeconomy program, and Macroeconomic Policy Frameworks program
Tim Robinson	University of Melbourne	Open Economy Macroeconomics program, Commodities and the Macroeconomy program, and Model Uncertainty and Macro-Econometrics
Guillaume Rocheteau	University of California at Irvine	Macroeconomic Theory program
John Romalis	Macquarie University	Globalisation and Trade program
Michael Roos	Ruhr-University Bochum	Behavioural Macroeconomics and Complexity program
Rina Rosenblatt-Wisch	Swiss National Bank	Behavioural Macroeconomics and Complexity program
J Barkley Rosser Jr	James Madison University	Behavioural Macroeconomics and Complexity program
Alberto Russo	Università Politecnica delle Marche	Behavioural Macroeconomics and Complexity program
Ashish K. Sedai	University of Texas	Growth, Demographics and Productivity program
Sherrill Shaffer	University of Wyoming	Finance and the Macroeconomy program
Akshay Shanker	The University of New South Wales	Climate Change and Energy program

Vivek Sharma	Luiss University	Finance and the Macroeconomy program
Jeffrey Sheen	Macquarie University	Macroeconomic Policy Frameworks program
Shuping Shi	Macquarie University	Finance and the Macroeconomy program
Kalvinder K. Shields	University of Melbourne	Model Uncertainty and Macro-Econometrics program, and COVID-19 and the Macroeconomy
Pierre Siklos	Wilfrid Laurier University	Finance and the Macroeconomy program, and COVID-19 and the Macroeconomy
Aarti Singh	The University of Sydney	Macroeconomic Policy Frameworks program, and Micro-Heterogeneity and Macroeconomic Performance program
Reza Siregar	South East Asian Central Banks (SEACEN)	Finance and the Macroeconomy program
Christie Smith	New Zealand Treasury	Macroeconomic Policy Frameworks program
Peter N. Smith	The University of York	Finance and the Macroeconomy program
Michael Smith	University of Melbourne	Model Uncertainty and Macro-Econometrics
Eunbi Song	Monash University Malaysia	Multi-Country Models and Methods program
Rodrigo da Silva Souza	The Australian National University	Commodities and the Macroeconomy program
Nicola Spagnolo	Brunel University	Finance and the Macroeconomy program
John Stachursk	The Australian National University	Macroeconomic Theory program
Gabriele Standardi	Euro-Mediterranean Center on Climate Change	Multi-Country Models and Methods program
David Stern	The Australian National University	Climate Change and Energy program
Andrew Stoeckel	The Australian National University	Commodities and the Macroeconomy program, and COVID-19 and the Macroeconomy
Rodney Strachan	The University of Queensland	Model Uncertainty and Macro-Econometrics
Satoshi Tanaka	University of Queensland	Macroeconomic Theory program
Hsiao Chink (Benzhe) Tang	Asian Development Bank	Finance and the Macroeconomy program
Kam Ki Tang	University of Queensland	Finance and the Macroeconomy program
Lei Ming Chrismin Tang	Hong Kong Monetary Authority	Finance and the Macroeconomy program
Yuki Teranishi	Keio University	Macroeconomic Policy Frameworks program
Susan Thorp	The University of Sydney	Finance and the Macroeconomy program
Jing Tian	University of Tasmania	Finance and the Macroeconomy program
Eric Tong	Reserve Bank of New Zealand	Finance and the Macroeconomy program

Chung Tran	The Australian National University	Macroeconomic Theory program
Brian Trung Duc Tran	Reserve Bank of Australia	Open Economy Macroeconomics program, Macroeconomic Policy Frameworks program, Commodities and the Macroeconomy program, and Model Uncertainty and Macro-Econometrics
Sirimon Treepongkaruna	The University of Western Australia	Finance and the Macroeconomy program
Takayuki Tsuruga	Osaka University	Open Economy Macroeconomics program
Rod Tyers	The University of Western Australia	Multi-Country Models and Methods program, and COVID-19 and the Macroeconomy
Kozo Ueda	Waseda University	Macroeconomic Policy Frameworks program
Lawrence Uren	University of Melbourne	Macroeconomic Theory program
Luis Uzeda	Bank of Canada	Model Uncertainty and Macro-Econometrics
Shaun Vahey	The University of Warwick	Model Uncertainty and Macro-Econometrics
Farshid Vahid	Monash University	Model Uncertainty and Macro-Econometrics
Abbas Valadkhani	Swinburne University of Technology	Finance and the Macroeconomy program
Tugrul Vehbi	Bank of England	Finance and the Macroeconomy program
Philip Vermeulen	University of Canterbury	Finance and the Macroeconomy program
Joaquin Vespignani	University of Tasmania	Finance and the Macroeconomy program
Vladimir Volkov	University of Tasmania	Finance and the Macroeconomy program
Yuichiro Waki	Aoyama Gakuin University	Macroeconomic Theory program
Sumila Wanaguru	Central Bank of Sri Lanka	Finance and the Macroeconomy program
Mark Weder	Aarhus University	Macroeconomic Theory program, and COVID-19 and the Macroeconomy
Peter Wilcoxen	Syracuse University	Multi-Country Models and Methods program, and Climate Change and Energy program
John C. Williams	Federal Reserve Bank	Macroeconomic Theory program, and Model Uncertainty and Macro-Econometrics
Samuel Wills	University of Sydney	Commodities and the Macroeconomy program, and COVID-19 and the Macroeconomy
Anthony Wiskich	The Australian National University	Climate Change and Energy program
Justin Wolfers	University of Michigan	Behavioural Macroeconomics and Complexity program

Benjamin Wong	Monash University	Commodities and the Macroeconomy program, and COVID-19 and the Macroeconomy
Wing Thye Woo	University of California Davis	Multi-Country Models and Methods program
Alan Woodland	University of New South Wales	Globalisation and Trade program
Tomasz Wozniak	University of Melbourne	Model Uncertainty and Macro-Econometrics
Eliza Wu	University of Sydney	Finance and the Macroeconomy program
Ying Xu	The Treasury	Finance and the Macroeconomy program
Juanyi (Jenny) Xu	Hong Kong University of Science and Technology	Open Economy Macroeconomics program
Akira Yakita	Nagoya City University	Growth, Demographics and Productivity program
Abdullah Yalaman	Eskisehir Osmangazi University	Finance and the Macroeconomy program
Siew Ling Yew	Monash University	Growth, Demographics and Productivity program
Akhtar Zaman	Toi Ohomai Institute of Technology	Globalisation and Trade program, and Micro-Heterogeneity and Macroeconomic Performance program
Francesco Zanetti	University of Oxford	Macroeconomic Policy Frameworks program, and Micro-Heterogeneity and Macroeconomic Performance program
Bo Zhang	Wenzhou University	Model Uncertainty and Macro-Econometrics
Jasmine Zheng	Deloitte Access Economics	COVID-19 and the Macroeconomy
Yixiao Zhou	The Australian National University	Multi-Country Models and Methods program, Globalisation and Trade program, and COVID-19 and the Macroeconomy
Daniel Zizzo	The University of Queensland	Behavioural Macroeconomics and Complexity program

CAMA Visitors

Tatsuyoshi Okimoto, Keio University
Period: 1 April 2022 to 31 March 2024

Shaun Vahey, Warwick University
Period: 7 March 2022 to 31 December 2023

Dan Andrews, Organisation for Economic Co-operation and Development (OECD)
Period: 6 December 2021 to 6 December 2023

Kate McKinnon, Vanguard
Period: 18 October 2021 to 18 October 2023

Edda Claus, Wilfrid Laurier University
Period: 1 September 2022 to 30 June 2023

Funding

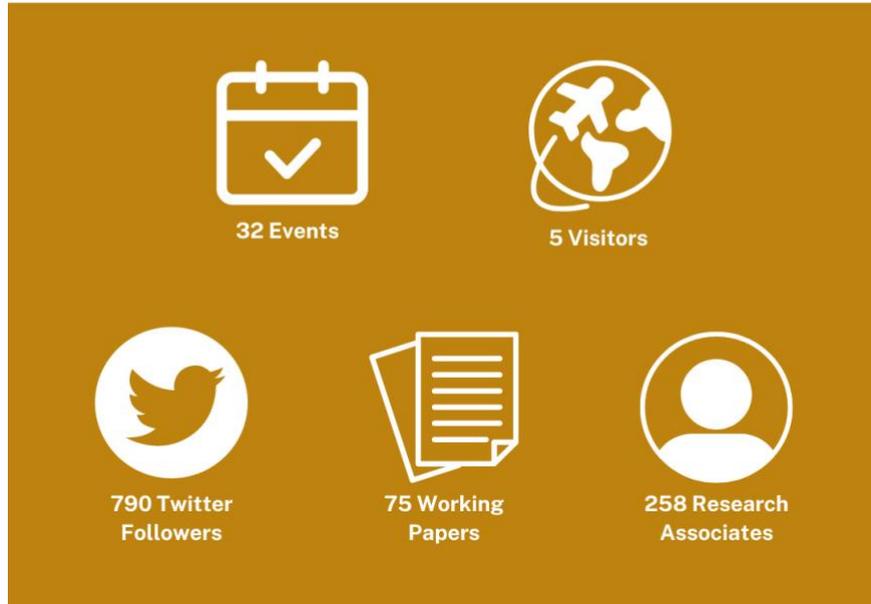
The table below summarizes CAMA funding for 2022:

Income		
Gov Block Grant Funding	\$	-
Other Gov Grants Contracts	\$	388,169.57
Hecs CGS	\$	-
Tuition Fees	\$	-
Non Govt Revenue	\$	258,058.13
Investment Revenue	\$	-
Other Revenue	\$	5,732.48
Total Income	\$	651,960.18
Expenses		
Salaries and Related Costs	\$	420,566.70
Employee Related Costs	\$	3,755.03
Contracted Services	\$	54.50
Consumables & Supplies	\$	6,257.80
Travel & Conferences	\$	98,633.27
Site Services	\$	298.50
Scholarships, Stipends & Prize	\$	-
External Contributions	\$	14,152.00
Other Misc Op Expenses	\$	4,782.00
Borrowing Cost	\$	-
Bad Debts and Write Downs	\$	-
Total Expenditure	\$	548,499.80
Transfer inflow/outflow	\$	51,832.11
Total operating result	\$	155,292.49
Budget remaining	\$	373,398.36

CAMA by Numbers



ANU Centre for Applied
Macroeconomic Analysis
2022 By the Numbers



Contact

Centre for Applied Macroeconomic Analysis (CAMA)

Crawford School of Public Policy

College of Asia and the Pacific

Homepage: <https://cama.crawford.anu.edu.au/>

Email: cama.admin@anu.edu.au

Twitter: @CAMacroAnalysis

Blog: <https://www.cama.net.au/>