

ANNUAL REPORT 2018

Centre for Applied Macroeconomic Analysis



Crawford School of Public Policy

College of Asia and the Pacific

Message from the Director

We have completed another successful year. In 2018 we organized or sponsored 31 events including public lectures, seminars and conferences, we published 62 new working papers and six CAMA newsletters.

A total of nine new associates were added to CAMA in 2018. The CAMA affiliates contributed to the public debate participating in interviews with prestigious news agencies such as The Australian, ABC news, Australian Financial Review and others. CAMA participated on Twitter (@CAMacroAnalysis) and contributed to the APPS Policy Forum.

CAMA is also a node of the ARC Centre of Excellence in Population Ageing Research (CEPAR). Established in 2011 and renewed in 2017, CEPAR is a collaboration between academia, government and industry. In 2018, The Australian National University node hosted the 'Policy dialogue on retirement incomes'. The event brought together leading Australian and international experts, policy makers, researchers and commentators to discuss the current and future challenges for retirement.

CAMA is a network of scholars. The success of CAMA draws directly on the active participation of researchers around the world who believe in excellence in research and public policy and contributing to public goods. I would like to thank everyone in CAMA for their contributions and their support.

Warwick McKibbin

Director, Centre for Applied Macroeconomic Analysis

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Centre for Applied Macroeconomic Analysis – an overview

The Centre for Applied Macroeconomic Analysis (CAMA) is located in 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 across the globe. CAMA's objectives are to advance research and postgraduate training in applied macroeconomic and financial issues.

CAMA was founded by Professor Warwick McKibbin who is also the current director. 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.

In late 2018, Professor Mardi Dungey became terminally ill with cancer. Mardi made substantial contributions to society through her research, her supervision of students, her mentoring of junior academics, her many professional contributions to the economics profession and as a wonderful co-author to many people. She was a driving force behind the establishment of CAMA in 2003 and was the inaugural Deputy Director. Mardi passed away on January 12, 2019 but left an enormous legacy, including CAMA.



Research programs

The research activities of the Centre 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. Proposals 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
Finance and the macroeconomy
Globalisation and trade
Growth, demographics and productivity
Macroeconomic policy frameworks
Macroeconomic theory
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 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 are 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, 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/conferences, collaboration with other CAMA research programs, and graduate courses/seminars on this topic.

Climate change and energy

Directors	Barbara Buchner and Warwick McKibbin
Research Associates	See 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 implications for climate change. This program focuses on the importance of energy use and climate change as well as 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 polices
- the macroeconomic consequences 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.

Commodities and the macroeconomy

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

The implications of demand for resources by emerging market economies and understanding the special 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 and their financial market and macroeconomic effects, as well as 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.

Finance and the macroeconomy

Directors	Mardi Dungey and Renée Fry-McKibbin
Research Associates	See 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 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 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 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?

Understanding 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 Christopher Smith
Research Associates	See 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	Bruce Preston
Research Associates	See 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 labor 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 workshop/courses featuring experts in the relevant field.

Model uncertainty and macro-econometrics

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

Countries are linked through trade flows and asset markets. The modeling 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 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 stabilization 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.

Current members as of end 2018

Paul Bloxham



Paul Bloxham 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



Mark Crosby 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



Mardi Dungey is 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 where she had been since early

2005. Prior to that she has held academic positions at The Australian National University

and La Trobe University. She has 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 speaks regularly to international forums on her research and holds a number of competitive grants. Mardi is currently 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*.

Renée Fry-McKibbin



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). Renee was Associate Dean Research of the College of

Asia & the Pacific at the 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.

Timo Henckel



Timo Henckel (non-voting chair) is a Lecturer in the Research School of Economics at ANU College of Business and Economics. He is also director of CAMA Behavioural Macroeconomics and Complexity research program. He was previously an adjunct lecturer in Crawford School of Economics and Government at The Australian National University. He holds a PhD from the London School of Economics where he has also briefly taught. His research interests are in monetary economics, international

macroeconomics, and behavioural macroeconomics.

Guay Lim



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



Professor Warwick McKibbin has a Chair in Public Policy in the ANU Centre for Applied Macroeconomic Analysis (CAMA) in Crawford School of Public Policy at The Australian National University (ANU). He is also an ANU Public Policy Fellow; 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 President of McKibbin Software Group Inc. 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.

James Morley



James Morley is 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, stabilization policy, and sources of persistent changes in macroeconomic and financial conditions.

John Romalis



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.

Jeffrey Sheen



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.

Past members

Saul Eslake

August 2011-June 2014



Saul Eslake 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.

Bob Gregory

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.

Mark Thirlwell

August 2011-September 2013



Mark Thirlwell 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.

Publications



The CAMA Working Paper Series covers a broad range of topics in one of the eleven areas covered by the CAMA research programs. The working papers are available online and through RePec (Research Papers in Economics) and SSRN (Social Science Research Network).

CAMA Working Paper Series

Paper no.	Title	Authors
62/2018	Inequality and market concentration, when shareholding is more	Gans J
	skewed than consumption	Leigh A
		Schmalz M
		Triggs A
61/2018	Are remittances a source of finance for private adaptation	Mahmud S
	strategy? Evidence from a natural experiment in the Cyclone Sidr	Hassan GM
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60/2018	Global inflation dynamics and inflation expectations	Feldkircher M
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59/2018	What do we know about the macroeconomic effects of fiscal	Castelnuovo E
	policy? A brief survey of the literature on fiscal multipliers	Lim G
58/2018	Financial and non-financial global stock market volatility shocks	Kang W
		Ratti RA
		Vespignani J
57/2018	Fuel prices and road accident outcomes in New Zealand	Best R
		Burke PJ
56/2018	Current account dynamics under information rigidity and	Shibata A
	imperfect capital mobility	Shintani M
		Tsuruga T
55/2018	Economic impact of energy consumption change caused by global	Brueckner M
	warming	Hansl B
54/2018	Drivers of growth in the Philippines	Davis JS
		Fujiwara I
		Wang J
53/2018	Time varying cointegration and the UK great ratios	Kapetanios G
		Millard S
		Petrova K
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52/2018	Multivariate stochastic volatility with co-heteroscedasticity	Chan J Doucet A Leon-Gonzalez R Strachan RW
51/2018	Korean unification: Economic adjustments under German assumptions	Lee JW McKibbin WJ
50/2018	Monetary policy transmission in systemically important economies and China's impact	Lombardi D Siklos PL Xie X
49/2018	Reducing dimensions in a large TVP-VAR	Chan JCC Eisenstat E Strachan RW
48/2018	What drives household inflation expectations in South Africa? Demographics and anchoring under inflation targeting	Du Plessis S Reid M Siklos P
47/2018	Nowcasting New Zealand GDP using machine learning algorithms	Richardson A Mulder TVF Vehbi T
46/2018	Energy intensity, growth and technical change	Shanker A Stern D
45/2018	Chinese resource demand or commodity price shocks: Macroeconomic effects for an emerging market economy	Fry-McKibbin R Souza RS
44/2018	Automation, taxes and transfers with International rivalry	Tyers R Zhou Y
43/2018	Effects of bank capital requirement tightenings on inequality	Eickmeier S Kolb B Prieto E
42/2018	The macroeconomic effects of bank capital requirement tightenings: Evidence from a narrative approach	Eickmeier S Kolb B Prieto E
41/2018	Reforming fiscal institutions in resource-rich Arab economies: Policy proposals	Mohaddes K Nugent JB Selim H
40/2018	Switching cost models as hypothesis tests	Cohen SN Henckel T Menzies GD Muhle-Karbe J Zizzo DJ
39/2018	Illegal drugs and public corruption: Crack based evidence from California	Flamini A Jahanshahi B Mohaddes K
38/2018	Real-time forecast combinations for the oil price	Garratt A Vahey SP Zhang Y
37/2018	Estimating a nonlinear new Keynesian model with the zero lower bound for Japan	liboshi H Shintani M Ueda K

36/2018	Quantitative or qualitative forward guidance: Does it matter?	Detmers GA
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	perspective	Minniti A
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34/2018	Risk management-driven policy rate gap	Caggiano G
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33/2018	Assessing monetary policy targeting regimes for small open	Paranavithana H
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		Zhu D
24/2018	Flexibility and frictions in multisector models	Miranda-Pinto J
2 1/2010	Texibility and metions in multisector models	Young ER
		TOULING EN
		C
23/2018	Do we really know that US monotony policy was destabilizing in	
23/2018	Do we really know that US monetary policy was destabilizing in	Haque Q
23/2018	Do we really know that US monetary policy was destabilizing in the 1970s?	Haque Q Groshenny N
	the 1970s?	Haque Q Groshenny N Weder M
23/2018 22/2018	the 1970s? Slovak electricity market and the merit order effect of	Haque Q Groshenny N
	the 1970s?	Haque Q Groshenny N Weder M
22/2018	the 1970s? Slovak electricity market and the merit order effect of	Haque Q Groshenny N Weder M
	the 1970s? Slovak electricity market and the merit order effect of	Haque Q Groshenny N Weder M
22/2018	the 1970s? Slovak electricity market and the merit order effect of photovoltaics	Haque Q Groshenny N Weder M Janda K
22/2018 21/2018	the 1970s? Slovak electricity market and the merit order effect of photovoltaics Population and house prices in the United Kingdom	Haque Q Groshenny N Weder M Janda K Day C
22/2018	the 1970s? Slovak electricity market and the merit order effect of photovoltaics	Haque Q Groshenny N Weder M Janda K

10/55		
19/2018	25 years of inflation targeting in Australia: Are there better	McKibbin W
	alternatives for the next 25 years?	Panton A
18/2018	Replication and robustness analysis of 'energy and economic	Bruns SB
	growth in the USA: a multivariate approach'	Konig J
		Stern DI
17/2018	Modelling the G20	McKibbin W
		Triggs A
16/2018	International transmissions of aggregate macroeconomic	Cross JL
1	uncertainty in small open economies: An empirical approach	Hou C
		Poon A
15/2018	Deflation forces and inequality	Tyers R
		Zhou Y
14/2018	Understanding the US natural gas market: A Markov switching	Hou C
	VAR approach	Nguyen BH
		0.7
13/2018	Self-selection and treatment effects in macroeconomics:	Pontines V
	Revisiting the effectiveness of foreign exchange intervention	
12/2018	Fuel prices and road deaths in Australia	Burke PJ
		Teame A
11/2018	Cooperative banks and local economic growth	Coccorese P
		Shaffer S
/		
10/2018	Global climate change mitigation: Strategic incentives	Perdana S
		Tyers R
09/2018	Quantifying the impact of the November 2014 Shanghai-Hong	Burdekin RCK
	Kong stock connect	Siklos PL
08/2018	The anatomy of inflation: An economic history perspective	Bohl MT
		Siklos PL
- /		
07/2018	What has publishing inflation forecasts accomplished? Central	Siklos PL
	banks and their competitors	
06/2018	Speculative activity and returns volatility of Chinese major	Ahmed E
	agricultural commodity futures	Rosser Jr JB
		Uppal JY
05/2018	Measuring financial interdependence in asset returns with an	Fry-McKibbin R
	application to euro zone equities	Hsiao CYL
		Martin VL
04/2018	Critically assessing estimated DSGE models: A case study of a	
	multi-sector model	Pagan AR
		Robinson T
03/2018	Closing the evidence gap: Energy consumption, real output and	Nepal R
	pollutant emissions in a developing mountainous economy	
02/2018	Ignorance isn't bliss: Uninformed voters drive budget cycles	Paija N Janku J
5212010	ignorance isn't bliss. Onlinornied voters drive budget cycles	
		Libich J

01/2018 Belief adjustment: A double hurdle model and experimental evidence

Henckel T Menzies GD Moffatt PG Zizzo DJ

Newsletters

CAMA published six newsletters in 2018. The newsletter is developed through the contribution of the CAMA members and it includes among other things information about new members, projects, awards, publications, interviews, and events. Online copies of the newsletters can be found at the CAMA website (https://cama.crawford.anu.edu.au/cama-publications/newsletter).

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 2018 include:

Behavioural Macroeconomics and Complexity program

• **McDonald IM**, 2018, 'Introduction' to Policy Forum: Economics and populism, *Australian Economic Review*, 51, 3, 396-8.

Climate Change and Energy program

• Abayasekara A and **Burke P**, 2018, 'The price elasticity of electricity demand in the United States: A three-dimensional analysis'. *The Energy Journal* 39(2), 123–145.

• Best R and **Burke PJ**, 2018, 'Electricity availability: A precondition for faster economic growth?' *Energy Economics* 74, 321–329.

• Best R and **Burke PJ**, 2018, 'Adoption of solar and wind energy: The roles of carbon pricing and aggregate policy support.' *Energy Policy* 118, 404–417.

• Burke PJ and Teame A, 2018, 'Fuel prices and road deaths in Australia.' *Economic Papers* 37(2), 146–161.

• Burke PJ, 2018. 'Metal footprint linked to economy.' Nature Geoscience 11, 224–225.

• Burke P and Kurniawati S, 2018, 'Electricity subsidy reform in Indonesia: Demand-side effects on electricity use', *Energy Policy* 116, 410–421.

• Halawa E, Shi X, **Nepal R**, Sari NH, & James G, 2018, 'The prospect for an Australian– Asian power grid: A critical appraisal'. *Energies*. 11(1).

• Jamasb T, **Nepal R** and Sen A, 2018, 'Have model, will reform: Assessing the outcomes of electricity reforms in Non-OECD Asia', *The Energy Journal*, Vol. 39, No. 4, pp. 181-209.

• Jamasb T, **Nepal R**, Singh A and Toman M, 2018, 'Electricity cooperation in South Asia: Barriers to cross-border trade', *Energy Policy*, Vol. 120, September, pp. 741-728. Jamasb T, Nepal R and Sen A, 2018, 'Small systems, big targets: Power sector reforms and renewable energy in small systems', *Energy Policy*, Vol. 116 (May), pp. 19-29, 2018.
Janda K, 2018, 'Slovak electricity market and the merit order effect of photovoltaics'. *Energy Policy* 2018, vol. 122, pp. 551-562.

• McKibbin WJ, Morris AC, Wilcoxen PJ, and Liu W, 2018, 'The role of border carbon adjustments in a US carbon tax', *Climate Change Economics*, Vol. 9, No. 1 (2018) 1840011 (41 pages).

Commodities and the Macroeconomy program

• Alawadhi A, Al-Musallam M, Burney NA, **Mohaddes K**, 2018, 'The dynamics and determinants of Kuwait's long-run economic growth', *Economic Modelling*, Volume 71, April 2018, Pages 289-304.

• Chudik A, Pesaran MH, **Mohaddes K** and Raissi M, 2018, 'Rising public debt to GDP can harm economic growth', *Economic Letter*, Federal Reserve Bank of Dallas, 13:3, pp. 1–4

• Cross J and **Nguyen BH**, 'Time varying macroeconomic effects of energy price shocks: A new measure for China', *Energy Economics*, ISSN 0140-9883.

https://doi.org/10.1016/j.eneco.2018.05.014.

• Hoang NT and **Nguyen BH**, 2018, 'Oil and iron ore price shocks: What are the different economic effects in Australia?' *Economic Record.* doi:10.1111/1475-4932.12398

• Smith B and **Wills S**, 'Left in the dark: Oil and rural poverty', *Journal of the Association of Environmental and Resource Economists*, forthcoming.

• Wills S, 2018, 'Leave the volatility fund alone: Principles for managing oil wealth', *Journal of Macroeconomics*, Volume 55, Pages 332-352, ISSN 0164-0704.

Finance and the Macroeconomy program

•Amand SSt, Lombardi D and **Siklos P**, 'Monetary policy spillovers: A global empirical perspective', *International Journal of Central Banking* (forthcoming).

• Athanasopoulos G and **Raghavan M**, 'Analysis of shock transmissions to a small open emerging economy using a SVARMA model', *Economic Modelling* (In Press). https://doi.org/10.1016/j.econmod.2018.09.004.

• Beaino GC, Lombardi D, CIGI, and **Siklos P**, 2018, 'The transmission of financial shocks on a global scale: How important are they?' (forthcoming).

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• Casavecchia L, Loudon G and **Wu E**, 2018, 'What moves benchmark money market rates? Evidence from the BBSW market', *Pacific-Basin Finance Journal* (forthcoming).

• Chintrakarn P, **Treepongkaruna S**, Jiraporn P, Lee SM, 2018, 'Do LGBT-supportive corporate policies improve credit ratings? An instrumental-variable analysis', *Journal of Business Ethics*, DOI: 10.1007/s10551-018-4009-9.

• **Dungey M**, Khan F, **Raghavan M**, 2018, 'International trade and the transmission of shocks: the case of ASEAN-4 and NIE-4 economies', *Economic Modelling*, 72 pp. 109-121.

• Ewing B, Kang W, **Ratti RA**, 2018, 'The dynamic effects of oil supply shocks on the US stock market returns of upstream oil and gas companies', *Energy Economics* 72, 505-516.

• Hassan G and Holmes M, 2018, 'How do workers' remittances respond to lending rates?' *International Migration*, online (doi: 10.1111/imig.12445)

• Hassan G, Holmes M and Valera H, 2018, 'Does inflation targeting matter for the behavior of inflation and output growth? Some regime-based evidence for Asian economies', *Journal of Economic Studies*, (forthcoming).

• Kang W, Perez de Gracia F, **Ratti RA**, 2018, 'The asymmetric response of gasoline prices to oil price shocks and policy uncertainty', forthcoming *Energy Economics*.

• Kapetanios G, **Price SG** and Young G, 2018, 'A UK financial conditions index using targeted data reduction: forecasting and structural identification'. *Econometrics and Statistics*. ISSN 2452-3062

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• Laureys L and **Meeks R**, 2018, 'Monetary and macroprudential policies under rules and discretion', *Economic Letters*, Volume 170, September 2018, Pages 104-108.

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• Lütkepohl H, **Milunovich G** and Yang M, 'Inference in partially identified heteroskedastic simultaneous equations models', *Journal of Econometrics* (fortcoming).

• Navone M, To T and **Wu E**, 2018, 'Analyst coverage and the quality of corporate investment decisions', *Journal of Corporate Finance* (forthcoming).

• Nguyen J, Smyth R and **Valadkhani A**, 2018, 'Mortgage product diversity: responding to consumer demand or protecting lender profit? An asymmetric panel analysis', *Applied Economics*. DOI: 10.1080/00036846.2018.1459038.

• Nguyen J, Smyth R and **Valadkhani A**, 2018, 'Consumer electricity and gas prices across Australian capital cities: Structural breaks, effects of policy reforms and interstate differences', *Energy Economics*, Vol. 72 (May 2018), pp. 365-375.

• Oldani C, 2018, 'Global financial regulatory reforms and sovereigns' exemption', *Journal of Financial Regulation and Compliance*, vol 26, ISSN: 1358-1988.

• **Pontines V**, 2018, 'Self-selection and treatment effects: Revisiting the effectiveness of foreign exchange intervention'. *Journal of Macroeconomics*, 57, pp. 299-316.

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Globalisation and Trade program

• Anderson MA, **Davies MH**, Smith SLS, 'Ethnic networks and price dispersion', *Review of International Economics*, Volume 24, Issue 3, p 514–535, August 2016.

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Growth, Demographics and Productivity program

• Alpaslan B and Ali A, 2018, 'The spillover effects of innovative ideas on human capital', *Review of Development Economics*, 22(1), pp. 333-360.

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Macroeconomic Policy Frameworks program

• **Bellofatto AA** and Besfamille M, 2018, 'Regional state capacity and the optimal degree of fiscal decentralization', *Journal of Public Economics* (forthcoming).

• Chai A and **Makin A**, 2018, 'Prioritizing foreign investment in APEC,' *Global Economy Journal*.

• Coibion O, Gorodnichenko Y, and **Kumar S**, 'How do firms form their expectations: new survey evidence', forthcoming in *American Economic Review*.

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• **Dennis R**, **Fujiwara I** and Waki Y, 'The optimal degree of monetary-discretion in a New Keynesian model with private information", *Theoretical Economics* (forthcoming).

• Franta M, Libich J and Stehlík P, 2018, 'Tracking monetary-fiscal interactions across time and space', *International Journal of Central Banking*, 14(3), 167-227.

• Froyen R and **Guender A**, 2018, 'The real exchange rate in Taylor Rules: An assessment', *Economic Modelling* (forthcoming).

• **Guender AV**, 2018, 'Credit prices vs. credit quantities as predictors of economic activity in Europe: Which tell a better story?' *Journal of Macroeconomics* (forthcoming).

• Makin A, 2018, 'Optimal monetary policy in inflation targeting open economies', *Economic Notes*.

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Macroeconomic Theory program

• Anand K and **Gai P**, 2018, 'Pre-emptive sovereign debt restructuring and holdout litigation'. *Oxford Economic Papers*, forthcoming.

• Ahnert J, Anand K, Chapman J and **Gai P**, 2018, Asset encumbrance, bank funding, and fragility. *Review of Financial Studies*, forthcoming.

• Eusepi S and **Preson B**, 2018, 'Fiscal foundations of inflation: Imperfect knowledge', *American Economic Review*, 108(9).

• Eusepi S and **Preson B**, 2018, 'The science of monetary policy: An imperfect knowledge perspective', *Journal of Economic Literature*, 56(1).

• Eusepi S, Giannoni M and **Preson B**, 2018, 'Some implications of learning for price stability', *European Economic Review*, 6.

Model Uncertainty and Macro-Econometrics program

• Bhattacharya P and Thomakos DD, 2018, 'Robust model ranking of forecasting performance', *Journal of Forecasting*, forthcoming.

• **Coe PJ**, 2018, 'Downward nominal wage rigidity: Evidence from Canada 1901-50,' *Canadian Journal of Economics* 51(3).

• **Manopimoke P**, 'Thai inflation dynamics in a globalized economy', *Journal of the Asia Pacific Economy*, forthcoming.

Multi-Country Models and Methods program

• McKibbin W and Lee J-W, 2018, 'Service sector productivity and economic growth in Asia'. *Economic Modelling* 74 (2018) 247-263.

• McKibbin W and Stoeckel A, 2018, 'Modeling a complex world: Improving macro models', *Oxford Review of Economic Policy* vol. 34 nos. 1-2.

• **Tyers R**, 2018, 'Automation and inequality in China', *China Economic Review* (forthcoming). (CAMA WP 59/2017).

Open Economy Macroeconomics program

• Anella M and **Punnoose J**, 'A prudential stable funding requirement and monetary policy in a small open economy', *Journal of Banking and Finance* 94, 89-106 (CAMA WP 23/2016).

• Giovannini M, Hohberger S, **Kollmann R**, Ratto M, Roeger W and Vogel L, 2018, 'Euro area and US external adjustment: The role of commodity prices and emerging market shocks', forthcoming, *Journal of International Money and Finance*.

• Kollmann R, 2018, 'Explaining international business cycle synchronization: Recursive preferences and the terms of trade channel', forthcoming, *Open Economies Review*.

• Sekine A and **Tsuruga T**, 'Effects of commodity price shocks on inflation: A crosscountry analysis', *Oxford Economic Papers*, forthcoming (CAMA WP 45/2017).

Books

Publications in academic books include:

Finance and the Macroeconomy program

• Ha J, **Kose MA**, and Ohnsorge F (eds) (2018). *Inflation in emerging and developing economies – Evolution, drivers and policies*. World Bank Group.

• Oldani C and Wouters J (eds.) (2018), *The G7, anti-globalism and the governance of globalization*, Taylor and Francis, ISBN 9781138583627 (in press September).

Growth, Demographics and Productivity program

• **Chapman B**, 'It works in practice, but would it work in theory? Joseph Stiglitz's contribution to our understanding of income contingent loans', in Martin Guzman (ed.) (2018), *Towards a just society: Joseph Stiglitz and twenty-first century economics*, Columbia University Press, New York: ch 22.

• **Chapman B**, 'The Politics of HECS', in P. Texiera and J. Shin (eds.) (2018), *Encyclopaedia of international higher education systems and institutions*, Springer, Dordrecht.

• **Chapman B**, 'The political economy of the higher education contribution scheme' (with Timothy Hicks) in B, Cantwell, H. Coates, R. King (eds.) (2018), *Handbook on the politics of higher education*, Edwards Elgar, Cheltenham: ch 14.

• **Chapman B**, 'HECS: A hybrid model for higher-education financing' (2018) in M. Fabian and R. Breunig (eds.), *Hybrid public policy innovations: Contemporary policy beyond ideology*, London, UK: Routledge: 119-133.

Macroeconomic Policy Frameworks program

• Makin A (2018) The limits of fiscal policy, Palgrave Macmillan, UK.

Media

In 2018, the CAMA affiliates contributed to the public debate participating in interviews with media including the *Australian Financial Review*, *The Australian, The Business*, and others.

Some articles published in 2018 include:

- McKibbin W and Stoeckel A, <u>Ciobo refuses to rule out anti-US measures over steel</u>, <u>aluminium tariffs</u>, 5 March, *The Australian*
- McKibbin W, <u>How countries should respond to Donald Trump's trade war</u>, 5 March, *Australian Financial Review*

- McKibbin W, <u>Trumping Trump's Trade War: A Modest Proposal</u>, 9 March, *Milken Institute Review*
- Beckworth D, <u>Will Australia Be the First Country to Try NGDPLT?</u>, 26 July, *Macro Musings Blog*
- McKibbin W, Extended interview with Warwick McKibbin, 30 July, The Business
- McKibbin W and Preston B, <u>It's not the Reserve Bank's job to pick winners and</u> <u>losers</u>, 8 August, *The Australian Financial Review*
- McKibbin W, <u>ANU ranked a global research leader on mechanisms for reducing</u> greenhouse gas emissions, 24 August, *ANU News*
- McKibbin W, In this episode Ticky Fullerton speaks with former RBA board member Warwick McKibbin on the latest job figures, 18 October, *yourMoney*
- McKibbin W, <u>Australia Can't Run Away from a Carbon Price any Longer</u>, 5 December, *Australian Financial Review*
- McKibbin W, <u>Ticky Fullerton speaks with ANU's Warwick McKibbin on RBA</u> monetary policy, 12 December, *yourMoney*

CAMA participated on Twitter (@CAMacroAnalysis) and contributed to the APPS Policy Forum. The Policy Forum is a public policy website devoted to Asia and the Pacific. It is located at Crawford School of Public Policy. Articles published by CAMA on APPS in 2018 include:

- McKibbin W, How countries could respond to Trump's Trade War, 6 March
- McKibbin W, Is Australia ready for the next GFC?, 10 September

Other articles published by APPS Policy Forum can be found at http://www.policyforum.net/



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 also hosts the CAMA Macroeconomics Brown Bag Seminars where staff, visitors and PhD students have an opportunity to present their work.

In 2018, the public lectures presented by CAMA were audio recorded. These podcasts can be found at https://cama.crawford.anu.edu.au/news-events/podcasts/audio

CAMA takes gender balance very seriously. All conferences and workshops are designed with a goal of having 50% women as session chairs/presenters/discussants. All workshops and conferences supported by CAMA must have at least one woman as a member of the organising committee and the program should attempt to achieve gender balance in its design. In 2018 the gender balance for conferences and workshops organised by CAMA was achieved. For the public lectures there were 33% women (note that one male visitor presented twice, if we consider only one presentation the numbers become 50% women).

The statistics including all public lectures, seminars and workshops have 40% women speakers.

Workshops and conferences

Global economy: Alternative futures 6 to 7 March 2018 The Brookings Institution, Washington DC Various speakers

The 3rd international macroeconomics and finance conference

24 to 25 March 2018 Tokyo, Japan Various speakers CAMA sponsored this event.

Sheffield workshop in macroeconomics

11 June 2018 Sheffield, UK Various speakers CAMA sponsored this event.

NBER EASE 29 conference on political economy

21-22 June 2018 Seoul, Korea Various speakers CAMA sponsored this event.

2018 EFiC conference in banking and finance

5-6 July 2018 University of Essex Various speakers CAMA sponsored this event.

Macroeconomic outlook for the next decade in a politically disrupted world

19 July 2018 Washington DC Various speakers

Global economy: Looking forward and looking back on technology and macroeconomic policy 20-21 August 2018 The Australian National University Various speakers

Macroeconomic Modelling Workshop 6-7 December 2018 University of Tasmania Various speakers CAMA sponsored this event.

CAMP (Centre for Applied Macro-and Petroleum Economics of the BI Norgewian Business School) and CAMA joint conference

Oil and energy 2018

28 February – 2 March 2018 Rio de Janeiro, Brazil Various speakers

Energy economics 2018

5 -6 July 2018 Bolzano, Italy Various speakers

CAMA and UNSW joint conference

Policy dialogue on retirement incomes 1 November 2018 The Australian National University Various speakers

Public lectures

Rebuilding macroeconomic theory 3 May 2018 ANU David Vines, University of Oxford

In this talk David Vines described the rebuilding macroeconomic theory project, which led to a number of papers in the *Oxford Review of Economics Policy*, by authors including Paul Krugman, Olivier Blanchard, Joe Stiglitz and Simon Wren Lewis.

In the wake of the crisis in 2008, the need to change macroeconomic theory was similar to the situation in the 1930s, at the time of the Great Depression, and in the 1970s, when inflationary pressures were unsustainable. A number of leading macroeconomists described how the benchmark New Keynesian model might be rebuilt. Vines discussed a large number of changes which the authors recommended. In his view, the result was not a paradigm shift, but an evolution towards a more pluralist.

Ten years after the financial crisis: What have we learned from the Renaissance in fiscal research? 9 October 2018 ANU Valerie Ramey, University of California – San Diego

In this lecture, Valerie Ramey presented an overview of her paper "Ten years after the financial crisis: What have we learned from the Renaissance in fiscal research?"

This paper took stock of what she had learned from the 'Renaissance' in fiscal research in the ten years since the financial crisis. Valerie first summarised the new innovations in methodology and discussed the various strengths and weaknesses of the main approaches. Reviewing the estimates, the author came to the surprising conclusion that the bulk of the estimates for average spending and tax change multipliers laid in a fairly narrow range, 0.6 to 0.8 for spending multipliers and -2 to -3 for tax change multipliers. However, she identified economic circumstances in which multipliers laid outside those ranges. Valerie concluded by reviewing the debate on whether multipliers were higher on the stimulus spending in the US and the fiscal consolidations in Europe.

Joint Public Lecture

Transforming Australia into an outward-looking economy: why the 1940s matters *10 May 2018*

ANU

David Vines, University of Oxford

In this talk Professor Vines described the radical shift in thinking by the generation of economists who worked in Canberra during and immediately after World War II, including Nugget Coombs, John Crawford, Lyndhurst Giblin, Leslie Melville, and, especially, Trevor Swan.

Their work made possible a Keynesian policy of rapid economic growth and high immigration that was outward-looking; it ensured that outcomes were no longer constrained by the gold standard, as had been the case during the Great Depression. The postwar era was transformed globally by the Bretton Woods Institutions and became known as a golden age; these Canberra economists saw their task as that of ensuring that Australia prospered during this period. It was Trevor Swan who showed how all the pieces fitted together. What this group of economists did laid the foundations for the later Hawke-Keating reforms.

In this seminar Vines described the work that he has done in the National Library of Australia on the ideas and actions of these economists, holding a National Library of Australia Fellowship. This public lecture was jointly organised by the Centre for Applied Macroeconomic Analysis, Crawford School of Public Policy and by the Centre for Economic History, Research School of Economics.

Seminars

Understanding price fluctuations in the National Electricity Market 15 March 2018 ANU Benjamin Aust, Technical University of Freiberg, Germany

In this seminar Benjamin Aust provided an overview of his recent paper, 'Understanding price fluctuations in the National Electricity Market'.

The Australian electricity wholesale market NEM, covering five regions, faced several technical incidents as well as price spikes in the last years. Questions occur in terms of potential reasons and market behaviour. By applying an event study approach, reactions of market actors in affected and non-affected regions may be analysed when outages occur.

Negative prices on power exchanges: empirical findings from Germany 28 March 2018 ANU Benjamin Aust, Technical University of Freiberg, Germany

In this seminar Benjamin Aust provided an overview of his recent paper, 'Negative prices on power exchanges - Empirical findings from Germany'.

While Germany is the largest energy exchange country in Europe, the occurrence of negative market prices represents an unusual and serious phenomenon for traders. Benjamin's paper investigated drivers of negative energy prices in Germany and run regressions to examine negative price indicators using a sample of hourly-based data over the period of 2012-2016. The empirical results found by the author proved the (im)possibility of forecasting negative day-ahead prices, whereas interestingly, the estimation of the trading volumes supported the underlying negative price factors.

Economic modelling of climate change

11 April 2018 ANU Tony Wiskich, PhD Student, CAMA

In this seminar Tony Wiskich presented his thesis proposal review on economic modelling of climate change. He discussed preliminary results for the first paper on the uncertainty of climate tipping points and the optimal carbon tax. The paper incorporated a tipping point into a prominent climate DSGE model and investigated sensitivities to tipping point characteristics, energy substitutability and technology growth. He then discussed his plan

for the second paper on a treatment of electricity generation for macroeconomic climate models. The treatment considered factor and variable costs, intermittency and dispatchable storage and incorporated into the climate DSGE model outlined in the first paper.

Investigating linkages between asset markets

17 April 2018 ANU Kate McKinnon, PhD Student, CAMA

In this seminar Kate McKinnon presented her thesis proposal review on 'Investigating linkages between asset markets: A latent factor approach'.

There is an abundance of theoretical and empirical literature concerned with the relationship between stock and currency returns. A more recent approach is premised on the purported portfolio rebalancing activities of international investors; the Uncovered Equity Parity condition (UEP) states that an increase in the equity return of the foreign market over the domestic market will induce investors to sell a portion of foreign equity holdings in order to maintain a target exchange rate exposure, resulting in a depreciation of the foreign currency. Evidence concerning the correlation between equity and currency returns of OECD countries is generally supportive of the condition, except in the case of the large primary commodity exporters of Australia, New Zealand and Canada.

This research sought to examine the proposition that the interconnections between the asset markets of these countries are distinct among countries with otherwise similar characteristics. In connection with this, the role that global commodity prices play in the joint determination of currency and equity prices was also considered.

Macroeconomic effects of government expenditure

23 April 2018 ANU Daniel Silva Withmory, PhD Student, CAMA

In this seminar Daniel Silva Withmory presented his thesis proposal review on 'Macroeconomic effects of government expenditure: A SVAR approach'. He presented progress on his paper that assesses the effect of government expenditure on real activity, public debt and other economic variables in a small open economy such as Australia.

This study extended the structural vector autoregression model used by Blanchard and Perotti (2002) and Favero and Giavazzi (2007) by including an external sector, which is relevant for a small country like Australia. He also presented a plan for his research going forward.

Determinants of innovation in manufacturing SMEs: evidence from Vietnam 3 May 2018 ANU Hang Hoang, PhD Student, CAMA

In this seminar Hang Hoang presented the results of her investigation into the determinants of innovation in manufacturing SMEs in Vietnam. She used binary logistic regression on survey data collected in 2005 and 2013.

The results showed that firms located in large cities and possessing larger financial assets or physical assets, and firms that spend more on investment, are more likely to innovate. Interestingly, participation in social networks is less likely to lead to innovation. Business ownership structure and R&D spending have little impact on firm innovation probability.

In addition, the results showed that the impacts of firm size on innovation varies depending on type of innovation and the interactions with other internal and external factors. This paper contributes to the emerging literature on innovation and endogenous growth by providing better understanding of the factors that determine innovation.

Exploring the applications of a sophisticated stochastic volatility model 19 July 2018 ANU Beili Zhu, PhD Student, CAMA

In this seminar Beili Zhu provided an overview of her recent paper, 'Bayesian analysis of a moving average stochastic volatility model with leverage and heavy-tailed distributions using scale mixtures'.

This paper introduced a moving average stochastic volatility model with leverage and heavy-tailed distribution using the scale mixture of normal distributions. In terms of the parameter estimation, an efficient method based on Markov chain Monte Carlo (MCMC) algorithm was developed in this paper. In addition, Beili compared the new model with seven existing stochastic volatility models for their statistical properties using simulated data and three types of real data series. More specifically, the weekly return data of NY Harbor No. 2 Heating Oil and NY Harbor Conventional Gasoline Regular and the daily return data of Equity Hedge were analysed by the author. The model selection criteria relied on the logarithm of the marginal likelihood. The empirical results revealed that the proposed model provides better model fitting than other stochastic volatility alternatives for the returns of the NY harbor No.2 heating oil and Equity Hedge and can beat some of the stochastic volatility models when dealing with the weekly return of the US Gulf Coast Conventional Gasoline Regular.

Demographic changes and macroeconomic implications 26 July 2018 ANU Phitawat Poonpolkul, CAMA PhD student

Many countries are experiencing rapid changes in demographic structures, with increasing retirees and declining working-age population. This ageing pattern presents challenges for maintaining long-term economic growth and has significant impacts on production, fiscal sustainability, and monetary policy conduct.

In this seminar, Phitawat presented an overview of his PhD dissertation proposal which contains four papers exploring different aspects of demographic changes and macroeconomic implications. The first paper explores age-dependent risk-free and risky asset allocations in a real production economy. The second paper includes the monetary authority and nominal rigidities to investigate monetary policy transmission with an embedded asset channel. The third paper explores how unsynchronized demographic changes between two open economies affect their real interest rates. And the fourth paper studies the welfare impact under different fiscal policy reforms in a stochastic OLG model.

Regime switching in the relationship between the world oil market and China's output

2 August 2018 ANU Bao Nguyen, The Australian National University

This paper investigated the dynamic relationship between China's economic growth and international oil market. Extending Cross and Nguyen (2017), the author explicitly disentangled demand shocks stemming from China and the rest of the world and conducted a comprehensive model comparison. The author found evidence that the VAR model with constant coefficients but regime switches in co-variances governed by the Markov process was the best in-sample fit. The estimated results revealed that the impact of global oil market shocks on China's output was pronounced and underwent episodic changes. The author also found that the China factor in the global oil market had been consistently increased.

Liability-side financial frictions in an estimated asymmetric country model 9 August 2018 ANU Xuan-Lam Nguyen, PhD Student, Crawford School

Financial factors had been mostly neglected in the mainstream macro literature in the last twenty years before the 2007-2009 global financial crisis. The latest financial turmoil

served as a wake-up call, which made it clear that business cycle modelling can no longer ignore the financial sector. Economists have been working to revive this tradition by incorporating financial frictions into standard business cycle models. However, the literature has been silent about how financial frictions work in the general equilibrium framework of two asymmetric countries.

In this seminar, Xuan-Lam developed a business cycle model of two asymmetric countries in which independent banking sectors were subject to moral hazards due to their ability to divert assets. The model allowed for an incentive compatibility constraint on a diverse portfolio of loans as well as financial frictions on cross-border lending and the presence of exogenous entrepreneurial net worth. Using a Bayesian likelihood approach, he estimated the model with Australian and U.S. macro finance data. He found that: (i) the presence of financial frictions improved the fit of the model; (ii) the model with a full incentive compatibility constraint outperformed its less constrained variants and the pure trade open economy model in reproducing the cross-border synchronisation of business cycles; and (iii) domestic financial shocks accounted for a substantial portion of business cycle fluctuations within the country and foreign financial shocks played a non-negligible role in cross-border spillovers.

A decreasing elasticity of substitution between clean and dirty energy and the potential implications for policy 23 August 2018 ANU Tony Wiskich, PhD Student, CAMA

Using a stylised structural model of electricity generation, Tony derived a (bimodal) production function for clean and dirty technologies with two elasticities: a high elasticity for low clean penetration and a low elasticity for high clean penetration. He found elasticities start at over 10 and reduce to just above unity above a switch point of around 50 per cent clean electricity penetration, where curtailment of intermittent generation dominates. This switch point can be increased through storage or demand management and he estimated relative parameters. He investigated the potential implications for optimal policy using a growth model with environmental constraints and endogenous technology. He found that a decreasing elasticity implied a greater role for a carbon tax over subsidies relative to an isoelastic function.

Innovation, corruption and growth: a case study of Vietnamese SMEs 27 September 2018 ANU Hang Hoang, PhD Student, CAMA

In this seminar, Hang Hoang presented the results of her investigation on how firms transform innovation knowledge into firm growth. Two-step quantile regressions together

with Vietnamese small and medium-sized enterprises (SMEs) surveys from 2005 to 2015 were employed to explore the reasons behind success and failure in transforming innovation into growth. The results showed that the relationship between the three types of innovation and growth varies by quantiles and depends upon growth measurements. Also, corruption has severely affected firm growth, and its effect is more often triggered in young and networking firms. Other firm attributes affect innovation and firm growth were identified and discussed including total assets, investment, managers' education, and export. Consequently, young SMEs in Vietnam are more innovative and pay more bribes than their older counterparts, but young firms lack resources and face a higher risk of failures in turning innovation knowledge into successful growth.

Improved methods for combining point forecasts for an asymmetrically distributed variable

22 November 2018 ANU Shaun Vahey, University of Warwick

Many studies have found that forecast combination improves forecast accuracy. An oftenused approach developed by Granger and Ramanathan (GR, 1984) utilises a linear-Gaussian regression model to combine point forecasts. This presentation generalised their approach for an asymmetrically distributed target variable. The copula point forecast combination methodology involves fitting marginal distributions for the target variable and the individual forecasts being combined and then estimating the correlation parameters capturing linear dependence. If the target variable is Gaussian distributed, the copula point combination is the GR combination. The author illustrated the methodology with two applications based on US macroeconomic variables that are asymmetrically distributed. The first application examined real-time forecasts for the Federal Funds rate. The second application considered forecasts for output growth. The copula point combinations outperformed the individual forecasts and conventional GR combinations in both applications.

IMF World Economic Outlook October 2018

27 November 2018 ANU Malhar Nabar, International Monetary Fund

This presentation discussed issues facing the global economy 10 years after the 2008 financial crisis, based on the recently launched edition of the IMF's flagship publication, World Economic Outlook, October 2018.

Low volatility as a predictor of stock market crisis 20 December 2018 ANU Lin Qi, PhD Student, CAMA

In this seminar, Lin Qi presented an overview of his thesis on 'low volatility as a predictor of stock market crisis'.

A famous hypothesis explaining stock market crises is that the shocks come from excessive risk that market participants take in relevant tranquil periods, known as "stability is destabilizing" (Minsky 1977). Focusing on the US stock market from 1960 to 2010, the first paper of the thesis classified market volatility level into high and low states. The preliminary findings showed that the volatility level was negatively related to the likelihood of future crises, though the effect was weak. This effect was much stronger if high and low volatility periods were considered separately. Lin Qi concluded that the low stock market volatility indicator demonstrated good predictability in both in-sample and out-of-sample tests.

CAMA and AJRC seminar

Abenomics and the bank of Japan 8 March 2018 ANU Professor Wataru Takahashi, Osaka University of Economics

Osaka University of Economics Professor Wataru Takahashi presented the first Australia-Japan Research Centre (AJRC) Seminar Series of Semester 1 2018 entitled 'Abenomics and the Bank of Japan', which is co hosted by the Centre for Applied Macroeconomic Analysis at the Crawford School of Public Policy

Although economic performances in Japan have improved, Japan still faces serious economic problems in the future ahead. An increase in corporate profit and employment and rising stock prices are presented as an achievement of Abenomics by its supporters. But these 'achievements' don't necessarily demonstrate the future benefits of Abenomics. This seminar provided key points to evaluate Abenomics and discuss the key role the Bank of Japan has played in Abenomics. The seminar also discussed the problems of Japan's current institutional framework based on last two decades' experiences and demonstrate how Japan's struggle with deflation since the late 1990s were ironically coincident with the enforcement of the Bank of Japan law.

CAMA and ANU Centre for European Studies seminar

Europa Policy Lab - Renewable Electricity in Central Europe: Policies and Quantitative Estimation

2 August 2018 ANU Professor Karel Janda, Charles University

This Jean Monnet Europa Policy Lab was jointly presented by the Centre for Applied Macroeconomic Analysis at the Crawford School of Public Policy, and the ANU Centre for European Studies.

Simultaneous promotion of European Energy Union policies aiming for close energy integration and EU 2030 climate and energy policy frameworks sometimes leads to contradictions. Increasing production of solar and wind energy, especially in Germany, puts higher demand on Central European transmission networks, creating significant policy problems for countries close to Germany.

Karel presented results of simulation model ELMOD focused on the impact of growing German renewable energy production and nuclear phase-out on electricity transmission networks in Central Europe. He also provided econometric estimation of merit order effect of photovoltaic electricity generation in the Czech Republic and Slovakia. Karel showed that decrease in wholesale price of electricity caused by merit order effect of photovoltaic electricity generation was either non-existent or quite small as compared to costs of photovoltaic promotion in these two Central European countries.

Staff and Associates

Director



Professor Warwick McKibbin, AO, FASSA is Professor of 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 President of McKibbin Software Group Inc. 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 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 modeling. Professor McKibbin has published more than 200 academic papers as well as being a regular commentator in the popular press. He has authored/ edited 5 books including "Climate Change Policy after Kyoto: A Blueprint for a Realistic Approach" with Professor Peter Wilcoxen of Syracuse University. He has been a consultant for many international agencies and a range of governments on issues of 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 Center 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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Name	Institution	Program
David Pearce	The Centre for International Economics	Climate Change and Energy program
Tuan A Phan	Australian Department of the Environment and Energy	Finance and the Macroeconomy program
Victor Pontines	South East Asian Central Banks (SEACEN)	Finance and the Macroeconomy program
Aubrey Poon	University of Strathclyde	Model Uncertainty and Macro- Econometrics program
Simon Price	University of Essex	Finance and the Macroeconomy program, and Model Uncertainty and Macro-Econometrics program
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	Norges Bank (Central Bank of Norway)	Model Uncertainty and Macro- Econometrics program
Tim Robinson	University of Melbourne	Open Economy Macroeconomics program, Commodities and the Macroeconomy program, and Model Uncertainty and Macro-Econometrics program
Guillaume Rocheteau	University of California at Irvine	Macroeconomic Theory program
John Romalis	The University of Sydney	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

Name	Institution	Program
J Barkley Rosser Jr	James Madison University	Behavioural Macroeconomics and Complexity program
Alberto Russo	Università Politecnica delle Marche	Behavioural Macroeconomics and Complexity program
Facundo Sepulveda	Universidad Santiago de Chile	Macroeconomic Theory program
Sherrill Shaffer	University of Wyoming	Finance and the Macroeconomy program
Anurag Sharma	Monash University	Growth, Demographics and Productivity 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
Pierre Siklos	Wilfrid Laurier University	Finance and the Macroeconomy program
Tara M Sinclair	The George Washington University	Model Uncertainty and Macro- Econometrics program
Reza Siregar	South East Asian Central Banks (SEACEN)	Finance and the Macroeconomy program
Peter N Smith	The University of York	Finance and the Macroeconomy program
Michael Smith	University of Melbourne	Model Uncertainty and Macro- Econometrics program
Nicola Spagnolo	Brunel University	Finance and the Macroeconomy program
John Stachurski	The Australian National University	Macroeconomic Theory program
Gabriele Standardi	Fondazione Eni Enrico Mattei	Multi-Country Models and Methods program

Name	Institution	Program
David Stern	The Australian National University	Climate Change and Energy program
Andrew Stoeckel	The Centre for International Economics	Commodities and the Macroeconomy program
Rodney Strachan	The University of Queensland	Model Uncertainty and Macro- Econometrics program
Satoshi Tanaka	University of Queensland	Macroeconomic Theory program
Kam Ki Tang	University of Queensland	Growth, Demographics and Productivity program
Lei Ming Chrismin Tang	University of Melbourne	Finance and the Macroeconomy program
Yuki Teranishi	Keio University	Macroeconomic Policy Frameworks program
Susan Thorp	University of Sydney	Finance and the Macroeconomy program
Jing Tian	University of Tasmania	Finance and the Macroeconomy program
Verity Todoroski	The Australian National University	Commodities and the Macroeconomy program
Chung Tran	The Australian National University	Macroeconomic Theory program
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
Kozo Ueda	Waseda University	Macroeconomic Policy Frameworks program
Lawrence Uren	University of Melbourne	Macroeconomic Theory program
Shaun Vahey	The University of Warwick	Model Uncertainty and Macro- Econometrics program

Name	Institution	Program
Farshid Vahid	Monash University	Model Uncertainty and Macro- Econometrics program
Abbas Valadkhani	Swinburne University of Technology	Finance and the Macroeconomy program
Tugrul Vehbi	Reserve Bank of New Zealand	Finance and the Macroeconomy program
Joaquin Vespignani	University of Tasmania	Finance and the Macroeconomy program
Yuichiro Waki	The University of Queensland	Macroeconomic Theory program
Sumila Wanaguru	Central Bank of Sri Lanka	Finance and the Macroeconomy program
Mark Weder	University of Adelaide	Macroeconomic Theory program
Peter Wilcoxen	Syracuse University	Multi-Country Models and Methods program, and Climate Change and Energy program
John C Williams	Federal Reserve Bank of San Francisco	Macroeconomic Theory program, and Model Uncertainty and Macro- Econometrics program
Samuel Wills	University of Sydney	Commodities and the Macroeconomy program
Justin Wolfers	University of Michigan	Behavioural Macroeconomics and Complexity program
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
Mark Wright	University of California, Los Angeles	Globalisation and Trade program
Eliza Wu	University of Technology Sydney	Finance and the Macroeconomy program

Name	Institution	Program
Juanyi (Jenny) Xu	Hong Kong University of Science and Technology	Open Economy Macroeconomics program
Ying Xu	The Australian National University	Finance and the Macroeconomy program
Akira Yakita	Nanzan University	Growth, Demographics and Productivity program
Fang Yao	Reserve Bank of New Zealand	Open Economy Macroeconomics program, Finance and the Macroeconomy program, and Macroeconomic Policy Frameworks program
Daniel Zizzo	Newcastle University	Behavioural Macroeconomics and Complexity program

Visitors

Jong-Wha Lee Korea University 22 January - 2 February

David Vines University of Oxford 3 April - 30 June

Jong-Wha Lee Korea University 13 - 24 August

Valerie Ramey University of California, San Diego 8 - 10 October

Malhar Nabar International Monetary Fund 27 November **Benjamin Aust** Freiberg University of Mining and Technology 20 February - 5 April 2018

Karel Janda University of Economics, Prague 1 May - 31 August

Linda Tesar University of Michigan 20 - 24 August

Shaun Vahey University of Warwick 12-30 November

Funding

The table below summarizes CAMA funding for 2018 (including ARC and other research grants held within CAMA and fund raising for conferences).

Income	
Student fees	0.00
Other income	641,428.20
Internal sales	0.00
Transfer from other	51,698.00
Internal allocations	69,198.00
Operating grant	83,500.00
Investment income	0.00
Total Income	845,824.20
Expenses	
Salaries and related costs	395,971.38
Equipment - capital	0.00
Equipment - non-capital	0.00
Scholars expenses	51,611.40
Utilities and maintenance	0.00
Travel field & survey expenses	147,043.55
Expendable research materials	0.00
Contributions	2,965.40
Consultancies	0.00
Consumables	4,370.72
Depn & amort	0.00
Internal purchases	7,255.44
Other expenses	9,340.32
Contingency	0.00
Total Expenditure	618,558.21
Current year operating result	227,265.99
Transfer inflow/outflow	0.00
Net current year operating result	227,265.99
Prior year cash result	366,168.31
Net operating position	593,434.30

CAMA by numbers

In 2018 CAMA:

published 62 working papers and 6 newsletters

attracted 9 new affiliates

hosted or sponsored **31** events, including **17** seminars, **3** public lectures and **11** conferences

received 9 visitors

was followed by **331** Twitter users and tweeted **1,545** times since its start in August 2014

was a team of **219** research associates

Contact

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

Email: cama.admin@anu.edu.au

Twitter: @CAMacroAnalysis

Centre for Applied Macroeconomic Analysis (CAMA) Crawford School of Public Policy College of Asia and the Pacific The Australian National University #132, Lennox Crossing Acton ACT 2601

Director: Warwick McKibbin Ph: 61 2 6125 0301 E: Warwick.McKibbin@anu.edu.au

Administrator: Rossana Bastos Pinto Ph: 61 2 6125 8108 E: Rossana.Bastos@anu.edu.au