Australian
National
University

ANNUAL REPORT 2017

Centre for Applied Macroeconomic Analysis

Crawford School
of Public Policy

College of
Asia and the Pacific

Message from the Director

We had a very successful and productive year in 2017. Some of the achievements include: 79 new working papers added to the CAMA Working Paper Series, six CAMA newsletters were produced, 20 events were organised including public lectures, seminars and conferences. CAMA also sponsored three events in 2017.

A CAMA Podcasts page was introduced in 2017 featuring many audio records of public lectures presented during the year.

We concluded the review of the CAMA research associates and doctoral student associates. A total of 22 new research associates and eight doctoral student associates were added to CAMA in 2017.

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

Contents

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.

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. Until June 2013 the logistics were handled by Mr Damien Hughes and Dr Elizabeth Wakerly.

Current members

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*.

Bob Gregory
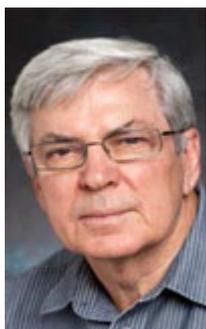
Professor Gregory has held positions at the University of Melbourne, London School of Economics, The Australian National University, Industries Assistance Commission, Northwestern University, and visiting positions at Harvard University, the University of Chicago and University College London.

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.

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.

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
79/2017	Oil and macroeconomic (in)stability	Bjornland HC Larsen VH Maih J
78/2017	Non-core liabilities and monetary policy transmission in Indonesia during the post-2007 global financial crisis	Pontines V Siregar RY
77/2017	Climate change and monetary policy: Dealing with disruption	McKibbin W Morris A Panton AJ Wilcoxen PJ
76/2017	Asset prices and macroeconomic outcomes: A survey	Claessens S Kose MA
75/2017	Macroeconomic implications of financial imperfections: A survey	Claessens S Kose MA
74/2017	Renewable energy projections for climate change mitigation: An analysis of uncertainty and errors	Irsyada MI Halog A Nepal R
73/2017	Food versus fuel: An updated and expanded evidence	Filip O Janda K Kristoufek L Zilberman D
72/2017	Impact of German Energiewende on transmission lines in the Central European region	Malek J Recka L Janda K
71/2017	Forecasting the real price of oil under alternative specifications of constant and time-varying volatility	Zhu B
70/2017	Automation and inequality with taxes and transfers	Tyers R Zhou Y

69/2017	Recovery from Dutch Disease	Dungey M Fry-McKibbin R Todoroski V Volkov V
68/2017	Revisiting the growth effects of fiscal policy: A Bayesian model averaging approach	Arin KP Braunfels E Doppelhofer G
67/2017	A state space approach to evaluate multi-horizon forecasts	Goodwin T Tian J
66/2017	Asia's rebalancing and growth	Kim S Lee JW McKibbin WJ
65/2017	Joint tests of contagion with applications to financial crises	Fry-McKibbin R Hsiao CYL Martin VL
64/2017	Do immigrants' funds affect the exchange rate?	Aziz N Cooray A Teo WL
63/2017	Is inequality increasing in r - g? Piketty's principle of capitalist economics and the dynamics of inequality in Britain, 1210-2013	Madsen JB
62/2017	Historical decompositions for nonlinear vector autoregression models	Wong B
61/2017	Measuring inflation expectations uncertainty using high-frequency data	Chan JCC Song Y
60/2017	Inflation and professional forecast dynamics: An evaluation of stickiness, persistence, and volatility	Mertens E Nason JM
59/2017	Automation and inequality in China	Zhou Y Tyers R
58/2017	A UK financial conditions index using targeted data reduction: forecasting and structural identification	Kapetanios G Price S Young G
57/2017	Trend-cycle-seasonal interactions: identification and estimation	Hindrayanto I Jacobs JPAM Osborn DR Tian J
56/2017	Modelling a complex world: Improving macro-models	McKibbin WJ Stoeckel A
55/2017	Tractable likelihood-based estimation of non- linear DSGE models	Kollmann R
54/2017	Dealing with time-inconsistency: Inflation targeting vs. exchange rate targeting	Davis JS Fujiwara I Wang J
53/2017	Some global effects of President Trump's economic program	McKibbin WJ Stoeckel A

52/2017	Signed spillover effects building on historical decompositions	Dungey M Harvey J Siklos P Volkov V
51/2017	Nationalism and economic openness: The cross-country evidence revisited	Agarwal V Arfin S Breunig R Weldeegzie S Zhang T
50/2017	The price elasticity of electricity demand in the United States: A three-dimensional analysis	Burke PJ Abayasekara A
49/2017	The trade effects of tariffs and non-tariff changes of preferential trade agreements	Cheong J Kwak DW Tang KK
48/2017	A cross-country database of fiscal space	Kose MA Kurlat S Ohnsorge F Sugawara N
47/2017	Incorporating relevant multivariate information for characterizing half-life with an application to purchasing power parity	Wong B
46/2017	Estimating and accounting for the output gap with large Bayesian vector autoregressions	Morley J Wong B
45/2017	Effects of commodity price shocks on inflation: A cross-country analysis	Sekine A Tsuruga T
44/2017	The stability of tax elasticities over the business cycle in European countries	Boschi M d'Addona S
43/2017	Technology and leisure: Macroeconomic Implications	Kavuri AS McKibbin WJ
42/2017	World steel production: A new monthly indicator of global real economic activity	Ravazzolo F Vespignani J
41/2017	A comment on Wu and Xia (2016) from a macroeconomic perspective	Krippner L
40/2017	Unpleasant monetarist arithmetic: Macroprudential edition	Libich J
39/2017	The role of border carbon adjustments in a US carbon tax	McKibbin WJ Morris AC Wilcoxen PJ Liu W
38/2017	The natural rate of interest in a nonlinear DSGE model	Hirose Y Sunakawa T
37/2017	How important are spillovers from major emerging markets?	Huidrom R Kose MA Ohnsorge F

36/2017	Global commodity prices and global stock volatility shocks: Effects across countries	Kang W Ratti RA Vespignani JL
35/2017	Macro-financial effects of portfolio flows: Malaysia's experience	Hwa TB Raghavan M Huey TT
34/2017	Fiscal foundations of inflation: Imperfect knowledge	Eusepi S Preston B
33/2017	What has publishing inflation forecasts accomplished? Central banks and their competitors	Siklos PL
32/2017	Government bond yields at the effective lower bound: International evidence	Lombardi D Siklos PL Amand SS
31/2017	Surfing a wave of economic growth	McGregor T Wills S
30/2017	Modelling the economic impacts of Korean unification	McKibbin WJ Lee JW Liu W Song CJ
29/2017	Unconventional monetary policy: interest rates and low inflation: A review of literature and methods	Comunale M Striaukas J
28/2017	Can Italy grow out of its NPL overhang? A panel threshold analysis	Mohaddes K Raissi M Weber A
27/2017	The role of the inflation target adjustment in stabilization policy	Eo Y Lie D
26/2017	Directed technical change and the British Industrial Revolution	Pezzey JCV Stern DI Lu Y
25/2017	Durations at the zero lower bound	Dennis R
24/2017	Trade uncertainty and income inequality	Brueckner M Vespignani J
23/2017	Joint tests of contagion with applications to financial crises	Fry-McKibbin R Hsiao CYL Martin VL
22/2017	Stagnation traps	Benigno G Fornaro L
21/2017	Explaining international business cycle synchronization: Recursive preferences and the terms of trade channel	Kollmann R
20/2017	Do central banks respond timely to developments in the global economy?	Bjornland HC Thorsrud LA Zahiri SK

19/2017	Weakness in investment growth: Causes, implications and policy responses	Kose MA Ohnsorge F Ye LS Islamaj E
18/2017	The impact of social justice on economic performance	Kavuri AS Shao H
17/2017	The merit order effect of Czech renewable energy	Lunackova P Prusa J Janda K
16/2017	Automation and inequality with taxes and transfers	Tyers R Zhou Y
15/2017	The Australian Macro Database: An online resource for macroeconomic research in Australia	Behlul T Panagiotelis A Athanasopoulos G Hyndman RJ Vahid F
14/2017	Revisiting the commodity curse: A financial perspective	Alberola E Benigno G
13/2017	The global role of the US economy: Linkages, policies and spillovers	Kose MA Lakatos C Ohnsorge F Stocker M
12/2017	Some consequences of using "measurement error shocks" when estimating time series models	Pagan A
11/2017	Do sovereign wealth funds dampen the negative effects of commodity price volatility?	Mohaddes K Raissi M
10/2017	The rise of the middle class and economic growth in ASEAN	Brueckner M Dabla-Norris E Gradstein M Lederman D
09/2017	The impact of global uncertainty on the global economy, and large developed and developing economies	Kang W Ratti RA Vespignani JL
08/2017	Some implications of learning for price stability	Eusepi S Giannoni MP Preston B
07/2017	Oil price shocks and policy uncertainty: New evidence on the effects of US and non-US oil production	Kang W Ratti RA Vespignani JL
06/2017	Financialization and speculative bubbles - International evidence	Ahmed E Rosser Jr JB Uppal JY
05/2017	Symmetric information bubbles: Experimental evidence	Asako Y Funaki Y Ueda K Uto N

04/2017	Nuclear power learning and deployment rates: disruption and global benefits forgone	Lang PA
03/2017	Intuitive and reliable estimates of the output gap from a Beveridge-Nelson Filter	Kamber G Morley J Wong B
02/2017	Measuring the output gap using stochastic model specification search	Chan JCC Grant AL
01/2017	Secular stagnation: Determinants and consequences for Australia	Taylor G Tyers R

Newsletters

CAMA published six newsletters in 2017. 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 2017 include:

Behavioural Macroeconomics and Complexity program

• Catalan M and **Di Guilmi C**, 2017, 'Uncertainty, rationality and complexity in a multi-sectoral dynamic model: the Dynamic Stochastic Generalized Aggregation approach', *Journal of Economic Behavior and Organization*, forthcoming.

• **McDonald IM**, 2017, 'We will end up being a third rate economy …a banana republic": How behavioural economics can improve macroeconomic outcomes', *Australian Economic Review*, 59, 2, 137-51.

• **Roos M**, 2017, 'Behavioral and complexity macroeconomics', *European Journal of Economics and Economic Policies*, 14(2).

Climate Change and Energy program

• Batsuuri T, **Burke P** and Yudhistira MH, 2017, 'Easing the traffic: The effects of Indonesia's fuel subsidy reforms on toll-road travel', T*ransportation Research Part A: Policy and Practice*, Volume 105, 2017, Pages 167-180, ISSN 0965-8564.

• Best R and **Burke P**, 2017, 'The importance of government effectiveness for transitions toward greater electrification in developing countries.' *Energies* 10(9): 1247.

• **Janda K**, Malek J and Recka L, 2017, 'Influence of renewable energy sources on transmission networks in Central Europe'. *Energy Policy*, vol. 108, pp. 524-537.

• **Janda K**, Lunackova P and Prusa J, 2017, 'The merit order effect of Czech photovoltaic plants.' *Energy Policy*, vol. 106, pp. 138-147.

• **Lu Y**, Liu Y and Zhou M, 'Rebound effect of improved energy efficiency for different energy types: A general equilibrium analysis for China', *Energy Economics*, Volume 62, February 2017, Pages 248-256.

• Standardi G, **Cai Y**, Yeh S, 2017, 'Sensitivity of modeling results to technological and regional details: The case of Italy's carbon mitigation policy', *Energy Economics*, in press.

Commodities and the Macroeconomy program

• **Cashin P**, **Mohaddes K** and Raissi M, 'China's slowdown and global financial market volatility: Is world growth losing out', *Emerging Markets Review*, Volume 31, June 2017, Pages 164–175.

• **Cashin P**, **Mohaddes K** and Raissi M, 'Fair weather or foul? The macroeconomic effects of El Niño', *Journal of International Economics*, Volume 106, May 2017, Pages 37–54.

• Chudik A, **Mohaddes K**, Pesaran MH and Raissi M, 'Is there a debt-threshold effect on output growth?' *Review of Economics and Statistics*, March 2017, Vol. 99, No. 1, Pages: 135-150.

• Cross J and **Nguyen BH**, 'The relationship between global oil price shocks and China's output: A time-varying analysis', *Energy Economics*, Volume 62, February 2017, Pages 79–91.

• **Koh WC**, 2017, 'Fiscal policy in oil-exporting countries: the roles of oil funds and institutional quality.' *Review of Development Economics* 21 (3): 567–590.

• **Koh WC**, 2017, 'Fiscal multipliers: new evidence from a large panel of countries.' *Oxford Economic Papers* 69 (3): 569–590.

• **Koh WC**, 2017, 'The effects of macroeconomic shocks on the Brunei economy: a sign restriction approach.' *Journal of the Asia Pacific Economy* 22 (3): 414–428.

• **Koh WC**, 2017, 'How do oil supply and demand shocks affect Asian stock markets?' *Macroeconomics and Finance in Emerging Market Economies* 10 (1): 1–18.

• **Koh WC**, 2017, 'Oil price shocks and macroeconomic adjustments in oil-exporting countries.' *International Economics and Economic Policy* 14 (2): 187–210.

• **Mohaddes K** and Pesaran MH, 2017, 'Oil prices and the global economy: Is it different this time around?' *Energy Economics*, Volume 65, June 2017, Pages 315–325.

• **Mohaddes K**, Raissi Mehdi and Weber A, 2017, 'Can Italy grow out of its NPL overhang? A panel threshold analysis' *Economics Letters*, Volume 159, Pages 185-189.

• **Mohaddes K** and Raissi Mehdi, 2017, 'Do sovereign wealth funds dampen the negative effects of commodity price volatility?' *Journal of Commodity Markets*, Volume 8, Pages 18-27, ISSN 2405-8513.

Finance and the Macroeconomy program

• Alessandri P, **Meeks R** and Nelson B, 2017, 'Shadow banks and macroeconomic instability'. *Journal of Money, Credit and Banking*, 49: 1483–1516.

• Apergis N and **Cooray A**, 2017, 'Economic freedom and income inequality: Evidence from a large panel of global economies, a linear and non-linear long run analysis', *Manchester School*, 85(1), 88-105.

• Chintrakarn P, Treepongkaruna S, Jiraporn P and Tong S, 2017, 'Does board independence substitute for external audit quality? Evidence from an exogenous regulatory shock,' *Australian Journal of Management*, forthcoming.

• Considine T, **Shaffer S** and Spierdijk L, 2017, 'How do banks adjust to changing input prices? A dynamic analysis of U.S. commercial banks before and after the crisis', *Journal of Banking and Finance*, forthcoming.

• **Cooray A**, Dutta N and Mallick S, 2017, 'Trade openness and labor force participation in Africa: The role of political institutions', *Industrial Relations: A Journal of Economy and Society*, 56(2), 319-350.

• **Cooray A**, Dzhumashev R and Schneider F, 2017, 'How does corruption affect public debt? An empirical analysis', *World Development*, 90(February), 115-127.

• Dzhumashev R and **Cooray A**, 2017, 'The Feldstein-Horioka model revisited', BE *Journal of Macroeconomics*, 17(1), January.

• Fantini G and **Oldani C**, 2017, 'The use of OTC derivatives by Italian regions: for hedging or trading purposes?' *Journal of Financial Risk Management*, 2017, Vol. XIV; No. 1 (p. 7-15) (CAMA WP 43/2015).

• **Hassan G**, Holmes M and Valera H, 2017, 'Is inflation targeting credible in Asia? A panel GARCH approach, *Empirical Economics*.

• **Hassan G**, Holmes M and Valera H, 2017, 'How credible is inflation targeting in Asia? A Quantile Unit Root Perspective', *Economic Modelling*.

• Hosseinzadeh A, Smyth R, **Valadkhani A** and Moradi A, 2017, 'What determines the efficiency of Australian mining companies?', *Australian Journal of Agricultural and Resource Economics*, forthcoming.

• Hudson K and **Vespignani J**, 2017, 'Understanding the deviation of Australian policy rate from the Taylor rule', *Applied Economics*, forthcoming.

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• Kennedy T, Smyth R, **Valadkhani A**, Chen G, 2017, 'Does income inequality hinder economic growth? New evidence using Australian taxation statistics', *Economic Modelling*, forthcoming.

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• **Meeks R**, 2017, 'Capital regulation and the macroeconomy: Empirical evidence and macroprudential policy' *European Economic Review*.

• O'Mahony B, Smyth R and **Valadkhani A**, 2017, 'Asymmetric causality between Australian inbound and outbound tourism flows', *Applied Economics*, 49(1), 33-50.

• **Okimoto T** and Takaoka S, 2017, 'The term structure of credit spreads and business cycle in Japan', forthcoming in *Journal of the Japanese and International Economies*.

• Phillips P and **Shi S**, 2017, Financial bubble implosion and reverse regression, *Econometric Theory*, forthcoming.

• **Pontines V**, 'The financial cycles in four East-Asian economies'. *Economic Modelling*, 65, 2017, pp. 51-66.

• **Shaffer S** and Spierdijk L, 2017, 'The concentration-stability controversy in banking: New evidence from the EU-25', *Journal of Financial Stability*, forthcoming.

• **Shi S**, 2017, 'Speculative bubbles or market fundamentals? An investigation of US regional housing markets', *Economic Modelling*, forthcoming.

• Smyth R and **Valadkhani A** and Worthington A, 2017, 'Regional seasonality in Australian house and apartment price returns', *Regional Studies*, 51(10), 1553-1567.

• Smyth R and **Valadkhani A**, 2017, 'Self-exciting effects of house prices on unit prices in Australian capital cities', *Urban Studies*, 54(10) 2376–2394.

• Smyth R and **Valadkhani A**, 2017, 'How do daily changes in oil prices affect US monthly industrial output?' *Energy Economics*, 67, 83-90.

• To TA, **Treepongkaruna S**, and Wu E, 2017, 'Are all insiders on the inside? Evidence from the initiation of CDS trading and short selling in the banking sector,' *Journal of International Financial Markets, Institutions & Money*.

• **Vespignani J**, 2017, 'Oil price shocks and policy uncertainty: New evidence on the effects of US and non-US oil production', forthcoming.

• Vadlamannati K C and **Cooray A**, 2017, 'Transparency pays? Evaluating the effects of the freedom of information laws on perceived government corruption', *Journal of Development Studies*, 53(1), 116-137.

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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.

• **Davies MH**, 'Technology transfer and north-south trade, *Review of International Economics*', Volume 24, Issue 3, p 447–483, August 2016.

Growth, Demographics and Productivity program

• Abdilahi A and **Alpaslan B**, 2017, 'Is there an investment motive behind remittances? Evidence from panel cointegration', *Journal of Developing Areas*, 51(1), pp.63-82.

• Abdilahi A and **Alpaslan B**, 2017, 'Pro-industry policies, sustainability and industrial growth in industrial policy and sustainable growth', *Sustainable Development*, ed. by M Yulek, Springer, pp.1-23.

• **Lee JW** and Wie D, 'Wage structure and gender earnings differentials in China and India', *World Development*, 97, September 2017.

Macroeconomic Policy Frameworks program

• Ales L, **Bellofatto AA** and Wang JJ, 2017, 'Taxing atlas: Executive compensation, firm size and their impact on optimal top income tax rates', forthcoming at *Review of Economic Dynamics*.

• Bui H, **Makin AJ** and Ratnasiri S, 2017, 'Is Vietnam's exchange rate overvalued?' *Journal of the Asia Pacific Economy* 22, 1, 1-15.

• Friesl M, Lenten L, **Libich J** and Stehlík P, 2017, 'In search of goals: Increasing ice hockey's attractiveness by a sides-swap', forthcoming at the *Journal of the Operational Research Society*.

• **Fujiwara I** and Wang J, 2017, 'Optimal monetary policy in open economies revisited', *Journal of International Economics*, 108, 300-314.

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• Hansen S, **McMahon M**, Prat A, 2017, 'Transparency and deliberation within the FOMC: a computational linguistics approach', *The Quarterly Journal of Economics*, forthcoming.

• **McMahon M**, 2017, 'Sound finances: Strategy or soundbite', *National Institute Economic Review*, forthcoming.

Macroeconomic Theory program

• Boneva LM, Braun RA, and **Waki Y**, 'Some unpleasant properties of log linearized solutions when the nominal rate is zero', *Journal of Monetary Economics*, Volume 84, pages 216–232.

• **Dmitriev A**, 'Composite habits and international transmission of business cycles', *Journal of Economic Dynamics and Control*, Volume 76, March 2017, Pages 1-34.

• **Groshenny N**, Haque Q, Tchatoka FD, Weder M, 2017. 'Monetary policy and indeterminacy after the 2001 slump', *Journal of Economic Dynamics and Control*, forthcoming (CAMA WP 02/2016).

• Imrohoroglu S, **Kitao S**, and Yamada T, 'Can guest workers solve Japan's fiscal problems?' *Economic Inquiry*, forthcoming.

• **Kitao S**, 'When do we start? Pension reform in aging Japan', *Japanese Economic Review*, forthcoming.

• **Kitao S**, Ljungqvist L, and Sargent TJ, 'A Life cycle model of Trans-Atlantic employment experiences', *Review of Economic Dynamics*, forthcoming.

• **Kitao S**, 'Policy uncertainty and cost of delaying reform: The case of aging Japan', *Review of Economic Dynamics*, Volume 27, January 2018, Pages 81-100, ISSN 1094-2025.

• **Maldonado WL** and Ribeiro J, 2017, 'Construction of a dividend index with all the distributed revenues', *Economics Bulletin* 37(2), pp. 756-764.

• Pavlov O and **Weder M**, 2017, 'Product scope and endogenous fluctuations', *Review of Economic Dynamics* 24, 175-191.

Model Uncertainty and Macro-Econometrics program

• Bhattarai S, Lee JW and **Park WY**, 'Policy regimes, policy shifts, and US business cycles', *Review of Economics and Statistics*, December 2016, Vol. 98, No. 5, Pages: 968-983.

• **Kamber G**, **Morley J** and **Wong B**, 2017, 'Intuitive and reliable estimates of the output gap from a Beveridge-Nelson filter', *Review of Economics and Statistics*, forthcoming (CAMA WP 03/2017).

• Limjaroenrat V and **Manopimoke P**, 2017, 'Trend inflation estimates for Thailand from disaggregated data', forthcoming in the *Journal of Economic Modelling*.

• **Manopimoke P**, 2017, 'The output Euler equation and real interest rate regimes', *Macroeconomic Dynamics*, forthcoming.

Multi-Country Models and Methods program

• Golley J, **Tyers R**, and Zhou X, 2017, 'Fertility and savings contractions in China: long-run global implications', *The World Economy*, forthcoming.

• Taylor G and **Tyers R**, 2017, 'Secular stagnation: a survey of determinants and consequences for Australia', *The Economic Record*.

Open Economy Macroeconomics program

• **Berka M**, Devereux MB and Engel C, 2017, 'Real exchange rates and sectoral productivity in the Eurozone', *American Economic Review*, forthcoming. (CAMA WP 66/2014).

• Cudre S and **Hoffmann M**, 2017, 'A provincial view of global imbalances: regional capital flows in China', *Review of World Economics*, pp 1-27 (CAMA WP 18/2016).

• Kamber G, Theodoridis K, **Thoenissen C**, 'News-driven business cycles in small open economies', *Journal of International Economics*, Volume 105, March 2017, Pages 77–89 (CAMA WP 02/2014).

• **Kano T**, Wada K, 2017, 'The first arrow hitting the currency target: a long-run risk

perspective', *Journal of International Money and Finance*, 74, 337-352.

• **Kollmann R**, 'Tractable likelihood-based estimation of non-linear DSGE models', forthcoming in *Economics Letters*.

Books

Publications in academic books include:

Behavioural Macroeconomics and Complexity program

• Delli Gatti D, Fagiolo, G, **Gallegati M**, Richiardi M, Russo,A„ 2017. *Agent based economics: A primer*, Cambridge University Press.

• **Di Guilmi C**, **Gallegati M** and Landini S, 2017. *Interactive macroeconomics.* Cambridge University Press.

• **Gallegati M**, Palestrini A., Russo A., 2017 (eds). *An introduction to agent based models*. Amsterdam, Elsevier.

• Lojak B and **Proaño CR**, 2017, 'Macroeconomic risk, fiscal policy rules and aggregate volatility in asymmetric currency unions: A behavioral perspective'. In: Bökemeier B & Greiner A (eds.): Inequality and Finance in Macrodynamics. *Dynamic Modeling and Econometrics in Economics and Finance Series*. New York: Springer, forthcoming.

Finance and the Macroeconomy program

• **Siklos PL**, 2017, *Central banks into the breach: From triumph to crisis and the road ahead*. Oxford University Press.

Growth, Demographics and Productivity program

• **Lee JW**, 2017, *Is this the Asian century?* World Scientific Publishing.

Macroeconomic Policy Frameworks program

• **Makin AJ**, 2017, *International money and finance*, Routledge UK.

Macroeconomic Theory program

• Attanasio O, Bonfatti A, **Kitao S** and Weber G, 2017, 'Global demographic trends: Consumption, saving and international capital flows' in *Handbook of the Economics of Population Aging*, Vol. 1A, Chapter 4.

Media

In 2017, the CAMA affiliates contributed to the public debate participating in interviews with media including *The Canberra Times*, ABC news, *Australian Financial Review* and others.

Some articles published in 2017 include:

- Tomorrow's 'new collar' jobs will be quite old-fashioned, our response should be too. Samuel Wills, 23 January, *The Conversation*
- Interest rates, Australian dollar set to rise as US inflation gathers momentum. Warwick McKibbin, 8 February, *ABC News*
- Surging US dollar may shape the world's fortunes in 2017. Warwick McKibbin, 27 February, *Australian Financial Review*
- Performance in mixed-sex and single-sex tournaments: What we can learn from speedboat races in Japan. Alison Booth and Eiji Yamamura, 14 March 2017, Vox – CEPR's Portal Policy
- Country risk expert insight: Australia vulnerable despite more balanced economy. Warwick McKibbin, 23 March 2017, *Euromoney*
- What economics has to say about housing bubbles? Timo Henckel, 3 April, *The Conversation*
- Cuts on taxes and increase on spending by the Trump administration will hurt emerging countries says Warwick McKibbin. Warwick McKibbin, 20 April, *ABC News*
- Trump less predictable after 100 days. Warwick McKibbin, 26 April, *SBS*
- Economics shoots … and scores! Solving the penalty shoot-out tragedy. Jan Libich, 11 May, *The Canberra Times*
- The gender pay gap is hurting productivity. Tom Kennedy, Abbas Valadkhani, Alison Sheridan and Maria Rae, 15 May, *The Conversation*
- South Korea should prepare for re-unification. Warwick McKibbin, 30 August 2017, *East Asia Policy Forum*
- Indonesia's fuel subsidy cuts prevented even worse traffic jams. Paul Burke, 2 October, *The Conversation*
- The health system is still awaiting Whitlam's modernization. Warwick McKibbin, 4 October 2017, *East Asia Policy Forum*
- Implications of the current low oil prices for MENA countries. Kamiar Mohaddes and Mehdi Raissi, 9 October, *Economic Research Forum*
- RBA should get ahead of Fed, says former board member Warwick McKibbin. Warwick McKibbin, 29 November, *Australian Financial Review*
- Warwick McKibbin's 'hybrid' climate solution that helps the RBA. Warwick McKikbbin, 4 December, *Australian Financial Review*

- Trump's tax cuts: short-term lift with a long-term cost. Warwick McKibbin, 19 December, *Australian Financial Review*

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 2017 include:

- Short-term gain, long-term pain. Authors: Warwick McKibbin and Andrew Stoeckel
- The health system is still awaiting modernization. Authors: Philip Clarke and Warwick McKibbin
- Trump's economic plan would be hostage to the almighty dollar - The fraught road ahead for the President's economic agenda. Author: Warwick McKibbin
- An uncertain future: Surging US Dollar may shape the world's fortunes in 2017. Author: Warwick McKibbin

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 2017, the public lectures presented by CAMA were audio recorded. These podcasts can be found at https://crawford.anu.edu.au/news-events/podcasts

Workshops and conferences

Korea unification: Prospect and global implications
27 to 28 February 2017
The Brookings Institution, Washington DC, US
Various speakers.

In this workshop, renowned Korean and international specialists in academia and research institutes presented their academic and policy-oriented research related to the prospects of Korean unification and its global political and economic implications. The conference focused on reviewing recent developments in the Korean peninsula and Northeast Asia, analysing various scenarios of Korean unification, and assessing the economic and security effects of unification on North and South Korea and the Asia-Pacific region. It discussed a direction for policies towards cooperation and peace in the Korean peninsula and Northeast Asia.

Global economy: Stocktake of new drivers for the next decade
1 March 2017
The Brookings Institution, Washington DC, US
Various speakers.

This workshop brought together leading scholars to discuss the macroeconomic issues that will likely drive the global economy for the next decade. Some key issues discussed were: Taking stock of the regime change in the US, Implications of US policy shifts for the rest of the world – the international order, and the Implications of US policy shifts for the rest of the world – China.

Global economy: Drivers for the next decade

31 May 2017 to 1 June 2017
The Brookings Institution, Washington DC, US
Various speakers.

This two-day workshop will brought together leading scholars to discuss the economic and geopolitical issues that could drive important outcomes in the coming years. Some key issues discussed included: Global geopolitics, The outlook of the US Economy, The future path of monetary policy, Infrastructure, What are economic implications of the next disruptive technologies and megatrends?, China's engagement abroad, Beyond China: Where will global growth come from?, The big picture of the emerging world, India and Africa.

28th annual NBER East Asian Seminar on Economics (EASE 28)

29 to 30 June 2017
Central Bank of the Philippines, Manila, the Philippines
Various speakers

CAMA sponsored this event.

Structural changes in the global economy: Trends, puzzles and implications

21 August 2017 to 22 August 2017
Hyatt Hotel, Canberra
Various speakers.

This two-day workshop on *Structural changes in the global economy: Trends, puzzles and implications* was co-organised by CAMA and the Australian Treasury. The Treasury funded the event completely including international airfares for the major speakers. The Workshop brought together leading scholars, senior officials of all Australian government departments and leading private sector economists. Participants came from World Trade Organisation, International Monetary Fund, European Central Bank, Keio University, Wellesley University, National University of Singapore, Federal Reserve, George Washington University, University of Mainz and Petersen Institute, to discuss the major issues facing the global economy with detailed discussion of policy options. Topics discussed included: the Chinese economy: long-run structural shifts; global trade: recent trends and future projections; Long-run decline in the natural rate of interest: the drivers of structural change; global productivity trends: understanding the recent slowdown; global inflation trends: understanding the recent subdued inflation rates; global labour markets: the global financial crisis and structural unemployment rates; and global macroeconomic policy settings.

2017 Macroeconomic Policy Meetings
5 to 6 October 2017
Melbourne Institute
Various speakers

CAMA sponsored this event.

Applied macroeconometrics workshop
5 December 2017
The Australian National Universtiy
Various speakers.

This workshop, jointly organised by the Centre for Applied Macroeconomic Analysis (CAMA), the Centre for Applied Macro- and Petroleum Economics (CAMP) at the Norwegian BI Business School and the University of Tasmania featured recent research in the general area of applied macroeconometrics, with a strong component on commodities and macroeconometrics. The workshop featured research on issues such as: the oil boom and the US economy; oil and fiscal policy; forecasting the real price of oil under volatility; Dutch disease; asset returns; commodity prices; and oil supply shocks.

Public lectures

World economic outlook
23 October
Petia Topalova, Deputy Division Chief, and Zsoka Koczan, Economist, International Monetary Fund's Research Department.

In this public lecture, Petia Topalova and Zsoka Koczan presented findings from the latest World Economic Outlook published by the International Monetary Fund.

The first topic was on recent wage dynamics in advanced economies. Close to a decade after the Great Recession, nominal wage growth in most advanced economies remains markedly lower than it was before the recession. This is the case even in countries where unemployment rates are now at, or even below, their averages in the years leading up to the recession. The authors found that the bulk of this slowdown can be explained by labour market slack (both headline unemployment and under utilisation of labour in the form of involuntary part-time employment), inflation expectations, and trend productivity growth. Even in economies where measured slack appears low, involuntary part-time employment continues to weigh on wage growth. Common factors—beyond the common components of slack, productivity, and price inflation—have also exerted downward pressure on wages in recent years, suggesting that the synchronised nature of excess capacity across countries might have amplified its effects. Overall the authors concluded that the wage growth is likely to remain subdued until involuntary part-time employment diminishes meaningfully or trend productivity growth picks up.

The second topic was on the effects of weather shocks on economic activity. Global temperatures have increased at an unprecedented pace in the past 40 years, and significant further warming could occur depending on our ability to restrain greenhouse gas emissions. The authors found that increases in temperature have uneven macroeconomic effects, with adverse consequences concentrated in countries with relatively hot climates, such as most low-income countries. In these countries, a rise in temperature lowers per capita output, in both the short and medium term, by reducing agricultural output, suppressing the productivity of workers exposed to heat, slowing investment, and damaging health. To some extent, sound domestic policies and development, in general,

alongside investment in specific adaptation strategies could help reduce the adverse consequences of weather shocks. But given the constraints faced by low-income countries, the international community must play a key role in supporting these countries' efforts to cope with climate change, a global threat to which they have contributed little. And while the analysis of the topic focuses on the impact of global warming in low-income countries, most countries will increasingly feel direct negative effects from unmitigated climate change through warming above optimal levels in currently cooler countries, more frequent natural disasters, rising sea levels, loss of biodiversity and adverse spillovers from vulnerable countries. Going forward, only continued international cooperation and a concerted effort to stem the man-made causes of global warming can limit the long-term risks of climate change.

Happiness for all? Unequal hopes and lives in pursuit of the American dream
24 July
Carol Graham, The Brookings Institution

In this public lecture Carol Graham explored the unequally shared American dream. Her study is distinct from other work on inequality because of the metrics that she uses. She uses traditional measures of income inequality as a point of departure and then use well-being data to highlight inequality in beliefs, hope, and aspirations. The high costs of being poor in the US, for example, are more evident in stress, insecurity, and hopelessness than in material deprivation. Inadequate access to health insurance and stable employment play a role, but so do the increasing gaps between the lives of the rich and the poor. These inequities may lead to more unequal future outcomes, as individuals who do not believe in their futures are unlikely to invest in them. The markers are evident in income, education, and employment data; in differences in mortality, marriage, and incarceration rates; and in other signs of societal fragmentation. They are even reflected in the words that different cohorts use. Those of the wealthy reflect knowledge acquisition and healthy behaviours; those of the poor reflect desperation, short-term outlooks, and patchwork solutions. According to the author, this is a complex problem, and there are no magic bullets. Graham's conclusions highlighted the important role of well-being metrics in identifying and monitoring trends in life satisfaction and hope, and in desperation and misery. She found, for example, remarkable levels of optimism among poor blacks but deep desperation (and rising pre-mature mortality rates) among poor whites. She highlighted policies – including experimental ones – in which hope is an important channel in improving economic outcomes.

The global growth slump: Causes and consequences
28 June
John C. Williams, Federal Reserve Bank of San Francisco

In this public lecture John C Williams provided an overview of his recent paper, *The Global Growth Slump: Causes and Consequences.* Economic growth has slowed across the globe. The global growth slowdown reflects fundamental changes in trends in demographics and productivity. For example, trend real GDP growth in the United States is currently 1.6 per cent, the slowest pace in memory. Similar slowdowns are seen in advanced economies across the globe. Nor are emerging market economies immune from this trend, as labour force growth slows to a trickle and the rapid gains in productivity growth associated with earlier stages of economic development are in the rear view mirror.

This slowdown has enormous consequences for economies going forward. Demographic trends imply worsening dependency ratios and government finances. Slowing real income growth and rising income inequality may undermine support for policies favoring longer-term economic growth. Finally, a slow growth global economy is associated with lower real interest rates, which creates challenges for monetary policy and financial stability. The author concluded that countries need to prepare for the challenges of slow global growth before the next economic storm hits.

OECD's economic outlook
13 June
Catherine Mann, Organisation for Economic Co-operation and Development

The OECD prepares outlooks four times a year for the global economy, individual members, and key partners. This presentation was about the OECD Economic Outlook, launched at the OECD Ministerial Council meeting on 6 June. Key issues on this outlook included: Will the upturn in confidence indicator be ratified by sustainable improvements in consumption, investment and trade? Can the disconnection between financial market indicators and metrics of real economic performance be resolved without a sharp snap-back in asset prices? What are the policy recipes to ensure stronger underpinnings of long-term productivity and inclusiveness, to support the capacity of policymakers to make good on promises to their citizens?

International economic cooperation in the Post-Trump-Post-Brexit era
29 March 2017
David Vines, University of Oxford

A hundred years ago, the first great era of globalisation collapsed into World War I. This was soon followed by the Great Depression and World War II. But at the end of that global crisis an enlightened generation of policymakers in the US and Britain led the world in creating an open international order. A remarkable period of economic growth then ensued, lasting for 60 years. That second era of global prosperity ended with the global financial crisis of 2008. The initial response by policymakers to this second global crisis was also an enlightened one, but this has ceased to be the case. Many observers link Brexit, the wider European crisis, and the rise of Trump to the failures which these policymakers committed.

In this lecture, Professor Vines, described what led us into this position, and considered possible responses. He asked first whether there was a viable solution to the crisis in Europe that Brexit brought into sharp relief. He then described how the effects of protectionist policies in the US might be countered, focusing on the crucial role of the Regional Comprehensive Economic Partnership process in Asia. Finally, he asked what kind of global leadership we might hope and expect that China would provide.

Precision prevention: Designing effective strategies for healthy communities
19 April 2017
Ross Hammond, The Brookings Institution

In this lecture, Hammond explored new emerging ideas at the intersection of population health and systems modeling, focused on developing and deploying community-level strategies to effectively tackle major health challenges like obesity, diabetes, and tobacco. He drew on research studies he leads funded by the National Institutes of the Health and findings from consensus committees at the National Academy of Sciences in which he has participated, and described efforts underway in the cities and states across the United States, Australia, and New Zealand.

Seminars

Technical progress and allocative inefficiency
26 October
Anpeng Li, PhD student, Research School of Economics, ANU.

In this seminar, Anpeng developed a growth model with heterogeneous firms to study the allocative inefficiency in emerging economies. The model economy learns new technology from the world frontier, and reallocates resources to fit the technological change. When a firm starts to catch up the frontier, it faces the uncertainty of future technical progress, and delays the adjustment of production factors as a response. The delayed adjustment generates allocative inefficiency in the early stage of development. Then, technological achievement narrows the gap to the frontier, reduces the future uncertainty, and improves the efficiency. Finally, the economy reaches a more efficient distribution again in the new steady state. The model developed by Anpeng suggested that the cross-country difference in allocative efficiency can be a by-product of the different stages of development.

An open economy model of trend inflation
29 June
Benjamin Wong, Reserve Bank of New Zealand

In this seminar, Benjamin Wong developed a model to empirically study the influence of foreign shocks in driving trend inflation and the inflation gap. He first applied his model to Australia, Canada, New Zealand, Norway, and Sweden, five advanced inflation targeting small open economies. A broad summary of his results suggested that while foreign shocks can have a sizeable influence on the inflation gap, they played a more marginal role in driving trend inflation. The author also found that much of the influence of foreign shocks in the inflation gap may be reflecting commodity price shocks. Wong's conclusions are further validated by extending his study to a more heterogeneous group of Asian economies. In sum, his results were consistent with the idea that while foreign shocks may have a short to medium run impact on inflation deviating from its long- run level, long-run or trend inflation was ultimately a monetary phenomenon largely determined by domestic monetary policy.

The impact of social justice on economic performance
22 June
Anil Savio Kavuri, PhD Student, CAMA

A large body of literature shows that institutions positively impacts economic performance. This study proposed that social justice which is an essential virtue of institutions also positively influences economic performance. Anil Kavuri built the case that social justice affects capital, human capital and technology accumulation. This in turn positively drives economic performance. The hypothesis is empirically supported with a cross-sectional

analysis of OECD countries and panel data analysis of EU countries. The results found by the author are robust under Instrument Variable (IV) analysis and numerous controls. The examination also determined that social justice contributed significantly to the traditional neoclassical model that relates output to the stock of human and physical capital. Consequently, the results implied that if a country such as Turkey is able to raise its rating to the level of Nordic countries (e.g. Norway), GDP per capita may increase from 10,000 USD to 56,000 USD.

Optimal growth with resource exhaustibility and pollution externality
15 June
Wei Jin, Research Fellow, UNSW

This seminar investigated a problem of optimal growth with resource exhaustibility and pollution externality, based on a unified framework that explicitly considers augmentable man-made capital, exhaustible resource reserves, and accumulative environmental pollutants as three stock variables for optimal control analysis. Characterizations of the social optimum showed that for any given man-made capital and resource reserves, resource extraction flows generated in optimal growth with both resource exhaustibility and pollution externality are smaller than those with only resource exhaustibility, and taking account of pollution externality resulting from resource extraction reduces the growth rate of consumption if man-made capital and natural resources are complements in final goods production. Existence, uniqueness and comparative statics of the steady state were analysed. Conditions for transitional dynamics stability of optimal growth with resource exhaustibility and pollution externality were established. Expositions were made on whether allocations in a market equilibrium are consistent with the social optimum outcomes.

Forecasting the real price of oil under alternative specifications of constant and time-varying volatility
18 May
Beili Zhu, PhD Student, CAMA

In this seminar Beili Zhu provided an overview of her recent paper, *Forecasting the real price of oil under alternative specifications of constant and time-varying volatility*. This study constructs a monthly real-time oil price dataset using backcasting and compares the forecast performance of alternative models of constant and time varying volatility based on the accuracy of point and density forecasts of real oil prices of both real-time and ex-post revised data. The study considers Bayesian autoregressive and autoregressive moving average models with respectively, constant volatility and two forms of time-varying volatility: GARCH and stochastic volatility (SV). In addition to the standard time-varying models, more flexible models with volatility in mean and moving average innovations are used to forecast the real price of oil. The results found by the author show that time-varying volatility models dominate their counterparts with constant volatility in

terms of point forecasting at longer horizons and density forecasting at all horizons. The inclusion of a moving average component provided a substantial improvement in the point and density forecasting performance for both types of time-varying models while stochastic volatility in mean was superfluous for forecasting oil prices.

Asymmetric reactions of the US natural gas market to its fundamental shocks
11 May
Bao Nguyen, Crawford School of Public Policy

In this seminar Bao Nguyen provided new empirical evidence on the asymmetric reactions of the US natural gas market and US economy to its market fundamental shocks in different phases of the business cycle. To this end, Bao employed a smooth-transition vector autoregression (STVAR) model to capture the asymmetric responses depending on economic conditions. The results found by the author indicates that in contrast to the prediction made by a linear VAR model, the STVAR model provides a plausible explanation to the behavior of the US natural gas market, which asymmetrically reacts in bad times and good times. In addition, US economic activity was found to be much more sensitive to oil and natural gas price shocks occurring in recessions than in expansions.

Taiwanese macroeconomic fluctuations: What are the determinants and what role does China play?
20 April
Kai-Yun Tsai, PhD Student, CAMA

In this seminar Kai-Yun Tsai provided an overview of her recent paper, *Taiwanese macroeconomic fluctuations: what are the determinants and what role does China play?*

Her paper applied a structural VECM with block exogeneity method to investigate the determinations of macroeconomic fluctuations in Taiwan and how and to what extent Chinese output shock plays in Taiwanese macroeconomic activities over the period from 1987 to 2015. The empirical results found by the author indicated that Taiwanese economy is significantly affected by external shocks, while the transmission of those shocks is through different channels. The USA output shock is via trade; the USA monetary shock is through Taiwanese monetary response; the terms of trade shock affects both exports, domestic expenditure and GDP. Because of the dual role as the largest exports market and the major source of imports, China exerts the influence with Chinese characteristics on Taiwanese economy. On the one hand, the Chinese output shock through the trade channel transmits positive impacts on Taiwanese economy; on the other hand, this shock via the terms of trade channel carries negative ones on it. A domestic demand shock plays a quite discernible role in GDP, inflation rate and interest rate, while a domestic inflation rate shock, which represents the domestic supply shock, has significant impacts on interest rate and real exchange rate. The results also found that before the Asian financial crisis/accession into the WTO, Taiwan was resilient to external

shocks and this finding is also documented in some previous studies, in which the sample period of the applied data all are prior to 2000.

Time varying macroeconomic effects of energy price shocks: A new measure for China
24 March
Bao Nguyen, Crawford School of Public Policy

In this seminar, Bao examined the effects of world energy price shocks on China's macroeconomy. He began by showing that the common use of oil prices as a proxy for more general energy price dynamics in studies on the US economy, does not extrapolate to the case of China. Having established this fact, Bao proposed a new index of quarterly energy prices which accurately reflects both the structure of China's total energy expenditure shares on primary commodities, along with intertemporal fluctuations in international energy prices. The methodology then employed a sufficiently rich set of time varying BVARs, identified by a new set of agnostic sign restrictions, to provide evidence that world energy price shocks have of significant time varying effects on China's macroeconomy. There are two main results found by the author. First, positive energy price shocks have consistently generated economic stagflation over the past two decades. Interestingly, while the inflation response of a 1 per cent energy price increase is consistently found to be 3.5 per cent, the real GDP responses have been decreasing over the sample period. Next, in contrast to the literature on the US economy, monetary policy is found to be focused on stimulating real GDP growth as compared to inflation stabilization. These results are shown to be robust to various data sources, thus strengthening the author's conclusion that energy price shocks have significant, time varying, effects on China's macroeconomy.

How individuals smooth spending: evidence from the 2013 government shutdown using account data
9 February 2017
Matthew Shapiro, University of Michigan

In this seminar Matthew Shapiro provided an overview of his recent paper, *How individuals smooth spending: Evidence from the 2013 government shutdown using account data*. Using comprehensive account records, this paper presented examined how individuals adjusted spending and saving in response to a temporary drop in income due to the 2013 US government shutdown. The shutdown cut paychecks by 40 per cent for affected employees, which was recovered within two weeks. Because it affected only the timing of payments, the shutdown provided a distinct experiment allowing estimates of the response to a liquidity shock holding income constant. Spending dropped sharply implying a naïve estimate of the marginal propensity to spend of 0.58. This estimate overstates how consumption responded. While many individuals had low liquidity, they used multiple

strategies to smooth consumption including delay of recurring payments such as mortgages and credit card balances.

RSFAS and CAMA joint seminar

Cryptocurrencies from an Austrian perspective
1 May 2017
Alistair Milne, Loughborough University, UK

This presentation outlines the technology of cryptocurrencies, avoiding misleading analogy with notes and coin. It then proposes using this technology to move both bank money and money-financed bank loans off balance sheet onto a single shared cryptocurrency ledger, together with government issued fiat money. This stops bank failures disrupting money and payments and hence helps achieve monetary outcomes desired by the Austrian school of economics: reducing excessive state interference in the market for credit (through bank regulation, lender of last resort and bail-out) and discouraging unsustainable money and credit expansions (leading to financial crisis and depression).

AJRC and CAMA joint seminar

The macroeconomic effects of Japan's unconventional monetary policies
21 March 2017
Ryuzo Miyao, University of Tokyo

Japan is the country with the longest history of implementing unconventional monetary policies, which were first introduced fifteen years ago and have since been expanded several times. A case in point is the quantitative and qualitative monetary easing (QQE) policy introduced by the Bank of Japan (BOJ) in early 2013 along with the commitment to continue with the program as long as necessary to achieve the BOJ's 2 per cent price stability target. This study attempted to assess the overall macroeconomic effects of Japan's unconventional monetary policies, with an emphasis on the recent QQE program. Using a stylised block-recursive vector autoregression framework, the analysis suggested that expansionary unconventional monetary policy shocks have clear macroeconomic effects, leading to a persistent rise in real output and inflation in Japan. The evidence also suggested that these macroeconomic effects became larger and more persistent after the introduction of QQE. A formal analysis that allows for a regime shift based on a smooth-transition vector autoregression model supported these findings.

Staff and Associates

Director

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.

Professor 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".

Professor McKibbin is internationally renowned for his contributions to global economic modeling. He has published more than 200 academic papers as well as being 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 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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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
Denise Osborn	University of Manchester	Model Uncertainty and Macro-Econometrics program
Les Oxley	The University of Waikato	Climate Change and Energy program
Gulcin Ozkan	The University of York	Open Economy Macroeconomics program
Alessia Paccagnini	University College Dublin	Model Uncertainty and Macro-Econometrics program
Adrian Pagan	University of Sydney	Model Uncertainty and Macro-Econometrics program
Woong Yong Park	Seoul National University	Model Uncertainty and Macro-Econometrics program
Oscar Pavlov	University of Tasmania	Macroeconomic Theory 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

Name	Institution	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
J Barkley Rosser Jr	James Madison University	Behavioural Macroeconomics and Complexity program
Alberto Russo	Università Politecnica delle Marche	Behavioural Macroeconomics and Complexity program

Name	Institution	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
David Stern	The Australian National University	Climate Change and Energy program
Andrew Stoeckel	The Centre for International Economics	Commodities and the Macroeconomy program

Name	Institution	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
Farshid Vahid	Monash University	Model Uncertainty and Macro-Econometrics program
Abbas Valadkhani	Swinburne University of Technology	Finance and the Macroeconomy program

Name	Institution	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
Mark Wright	University of California, Los Angeles	Globalisation and Trade program
Eliza Wu	University of Technology Sydney	Finance and the Macroeconomy 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

Name	Institution	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

PhD visitors

Rodrigo Souza
Federal University of Viçosa, Brazil
03 July 2017 - 31 March 2018

Academic visitors

Hilde Bjornland
Norwegian School of Management
5 December

Efrem Castlenuovo
University of Melbourne
5 December

Giovanni Caggiano
Monash University
5 December

Francesco Ravazzolo
University of Bolzano
5 December

Nicholas Grosheny
University of Adelaide
5 December

Leif Anders
Norges Bank
5 December

Joaquin Vespignani
University of Tasmania
5 December

Thomas Gundersen
Norwegian School of Management
5 December

Zsoka Koczan
International Monetary Fund
23 October

Yiyong Cai
The Treasury
31 August - 29 September

Eugenio Cerutti
International Monetary Fund
21 August - 22 August

Beatrice Weder Di Mauro
University of Mainz
21 August - 22 August

Filippo Di Mauro
National University of Singapore
21 August - 22 August

Robert Koopman
World Trade Organisation
21 August - 22 August

John Piggott
University of New South Wales
21 August - 22 August

John Romalis
University of Sydney
21 August - 22 August

Chiara Osbat
European Central Bank
21 August - 22 August

Sayuri Shirai
Keio University
21 August - 22 August

Dan Sichel
Wellesley College
21 August - 22 August

Tara Sinclair
George Washington University
17 August - 22 August

Aarti Singh
University of Sydney
21 August - 22 August

David Stockton
Peterson Institute
21 August - 22 August

Rochelle Edge
Federal Reserve
14 August - 22 August

Jong-Wha Lee
Korea University
10 August - 22 August

Mardi Dungey
University of Tasmania
31 July - 3 August

Carol Graham
The Brookings Institution
21 July - 25 July

John C. Williams
Federal Reserve Bank of San Francisco
28 June

Benjamin Wong
Reserve Bank of New Zealand
28 June - 30 June

Wei Jin
University of New South Wales
15 June

Catherine Mann
OECD
13 June

Ross Hammond
The Brookings Institution
18 April - 23 April

David Vines
University of Oxford
27 March - 7 April

Matthew Shapiro
University of Michigan
8 February - 10 February

Funding

The table below summarizes CAMA funding for 2017 (including ARC and other research grants held within CAMA and fund raising for conferences).

Income	
Student fees	0.00
Other income	293,628.99
Internal sales	5,000.00
Transfer from other	17,500.00
Internal allocations	0.00
Operating grant	83,500.00
Investment income	0.00
Total Income	399,628.99
Expenses	
Salaries and related costs	292,862.33
Equipment - capital	0.00
Equipment - non-capital	10,613.72
Scholars expenses	34,598.59
Utilities and maintenance	0.00
Travel field & survey expenses	112,323.81
Expendable research materials	0.00
Contributions	0.00
Consultancies	2,684.39
Consumables	8,629.50
Depn & amort	0.00
Internal purchases	1,887.91
Other expenses	15,719.67
Contingency	0.00
Total Expenditure	479,319.92
Current year operating result	-79,690.93
Transfer inflow/outflow	443.50
Net current year operating result	-79,247.43
Prior year cash result	445,569.83
Net operating position	366,322.40

In kind support from collaborating institutions $261,960

List of institutions:
Asiatic Research Institute at Korea University
The Brookings Institution
Australian Treasury
Centre for Applied Macro- and Petroleum Economics (CAMP) at the Norwegian BI Business School

CAMA by numbers

In 2017 CAMA:

published **79** working papers and **6** newsletters

attracted **22** new affiliates

hosted **20** events, including **9** seminars, **6** public lectures and **5** conferences

sponsored **3** events

received **34** visitors

was followed by **229** Twitter users and tweeted **1,157** times since its start in August 2014

was a team of **255** research associates

Contact

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Twitter: @CAMacroAnalysis

Centre for Applied Macroeconomic Analysis (CAMA)

Crawford School of Public Policy

College of Asia and the Pacific

The Australian National University

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Ph: 61 2 6125 8108

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