

**Report Type**

Please indicate what type of report you would like to submit by selecting one of the following:

**Mid Term Award Report x**

**End of Award Report**

**Full Name**

**Research centre: Cambridge-INET Institute, Faculty of Economics**

Investigators: Professor Giancarlo Corsetti (Director), Professor Coen Teulings (Co-Director)

Coordinators: Prof. Sanjeev Goyal, Prof. Kaivan Munshi, Dr Vasco Carvalho, Prof. Hamish Low, Prof Hamid Sabourian, Prof. Chris Harris, Prof. Oliver Linton, Prof. Alexei Onatski

**Please provide full name and title of the main applicant/award holder and names of all co-applicants, where applicable**

**Your E-Mail Address**

inet@econ.cam.ac.uk

**Faculty/Department**

Economics

**Project Title**

Cambridge-INET Institute

**Project Start Date**

2012 / August / 01

**Project End Date**

2017 /July /31

**Project Abstract**

**(Max 250 Words)**

Since its inception, Cambridge-INET has sought collaboration with---and funding by---CERF to foster research excellence in finance and economics in Cambridge, supporting projects across research groups on finance topics and the role of finance in microeconomic decisions and macroeconomic dynamics. Research in finance and economics is at the core of Cambridge-INET. Cambridge-INET was set up to promote fundamental and innovative research in economics, with the goal of pursuing excellence in New Economic Thinking in Cambridge, and contributing to our understanding of the economic and financial systems as an integrated system. Through a variety of instruments and initiatives, such as studentships and postdocs, visiting professor programme, conferences and

workshops, summer schools, dissemination activities, the Institute supports rigorous and high-impact empirical and theoretical research in Cambridge. Although the initiatives of the Institute are not limited to specific areas, its organisation is structured around four strategic themes: Networks, crowds and markets; Transmission mechanisms and policy; Information, Uncertainty and Incentives; Empirical Analysis of Financial Markets.

### **Activities and Achievement**

**A 300 word (maximum) and 100 word (minimum) summary of the main research results, in non-technical language, should be provided below. It should cover the aims and objectives of the project, main research results and significant academic achievements, dissemination activities and potential or actual impacts on policy and practice.**

Since the beginning of the academic year, Cambridge-INET researchers have produced a number of working papers and submitted papers to leading international journals. In this period, the working paper series has 16 new titles. Most of them are empirical and theoretical contributions to the econometrics of financial markets, and issues in finance and economic related to the European Debt crisis, the housing market, corporate debt structure and investment, corporate cash hoarding and R&D, the secular fall in the real interest rates. Since October, four of Cambridge-INET working papers have been published in top international journals. Substantial progress has been made in projects focused on high frequency trading.

In the current academic year, Cambridge-INET has organized 10 major conferences and workshops, mostly in collaboration with publically funded projects. Four have already been held: Debt Sustainability, Rules vs Discretion, Mini Conference: Labour Market Dynamics and the Macro economy and Cambridge IBSEN Workshop: Large scale Experiments. The others will be held in the near future. From the start of the academic year, Cambridge-INET has hosted and co-organised about 35 seminars, in collaboration with the Faculty, also in the form of research-oriented reading groups and workshops.

The support of Cambridge-INET is determinant for successful bids for external research funds, at UK and European level. In addition to the Centre for Macroeconomics, sponsored by the ESRC and two Horizon2020 grant projects, ADEMU and IBSEN, Cambridge-INET supported a project focused on Brexit, which obtained funds from the ESRC. The project is described below.

Cambridge-INET research has achieved important advances in all the main themes. New collaborations and projects have been developed, led by Faculty members and postdocs in areas in which Cambridge-INET and the Cambridge Faculty have established an international intellectual leadership: network and markets, institutions and development; the assessment of fiscal and monetary policy, the economics of unemployment crisis and secular stagnation, financial econometrics, herding behaviour and behavioural theories of decision making. Work from the themes has provided the basis for policy involvement by researchers, e.g., in the preparation of the coming G7 meeting in Italy, and the design of official lending by the European Stability Mechanism in Europe, and positioning papers at the European Central Bank and the Bank of England.

Cambridge-INET has intensified its programme of public talks and debates on emerging issues in theory and policy. Cambridge-INET has started a video series, with interviews and dialogues aiming

to explain in a simple and accessible manner major research topics and results and also covers public events on contemporary issues, sponsored by Cambridge-INET.

Young researchers sponsored by Cambridge-INET are increasing successful. During this year's job market, they had interviews and flyouts in top schools, both economics and finance, and multiple offers.

## Highlights:

### Conferences:

- **Debt Sustainability (2-3 Sept), Gonville & Caius College, Cambridge**

The conference was jointly organised with Horizon 2020 ADEMU and The European Stability Mechanism (ESM), brought together leading scholars to discuss theoretical and empirical issues in sovereign debt sustainability. In particular, the discussion was focused on debt maturity structure, official lending, and crisis resolution frameworks. The goal was to identify priorities for both future research and policy-making related to recent development in the Euro Area and multilateral lending frameworks. The conference was structured to facilitate interaction and discussion among leading academics and policymakers. Link: <http://ademu-project.eu/> <http://www.esm.europa.eu/>.

- **Rules versus Discretion: Macro and Financial Economics (12 & 13 Sept), King's College, Cambridge**

RULES VERSUS DISCRETION: MACRO AND FINANCIAL ECONOMICS INET NY AND C-INET EVENT: A Roundtable Dialogue on the Macro and Financial Economics of the Eurozone. The conference reflected on the foundations of the models of economic policy that coexist in Europe, discussing their historical, political, and cultural/intellectual roots. The dialogue on these foundations contributed to define more common grounds in the current debate on how to strengthen and complete the construction of a European economic and monetary union. Participants: Franziska Augstein (Süddeutsche Zeitung), Guillaume Amblard (Fin Tech Investor and Advisor), Markus Brunnermeier (Princeton University), Michael Burda (Humboldt University Berlin), John Chisholm (John Chisholm Ventures), Giancarlo Corsetti (Cambridge-INET Institute), Orsola Costantini (Institute for New Economic Thinking), Clive Cowdery (Resolution Foundation), Lars Feld, Walter (Eucken Institute), Thomas Ferguson (Institute for New Economic Thinking), Antonio Foglia (Belgrave Capital Management), Clemens Fuest (IFO Institute), Thomas Fricke (European Climate Foundation), Petra Geraats (University of Cambridge), Chryssi Giannitsarou (University of Cambridge), Dirk Hinrich Heilmann (Handelsblatt Research Institute), Michael Heise (Allianz SE), Michael Hesse (Kölner Stadt-Anzeiger), Otmar Issing (European Central Bank), William Janeway (Institute for New Economic Thinking), Anatole Kaletsky (Institute for New Economic Thinking), Hans Kundnani (German Marshall Fund of the United States), Prakash Loungani (IMF), Harold James (Princeton University), Rob Johnson (Institute for New Economic Thinking), Peter Jungen (Institute for New Economic Thinking), Rick McGahey (Institute for New Economic Thinking Gernot Müller (University of Tübingen), Stephen Peel (SMP Policy Innovation

Limited), Richard Portes (London Business School), Brendan Simms (University of Cambridge), Servaas Storm (Delft University of Technology), Matt Sware (Institute for New Economic Thinking), Coen Teulings (University of Cambridge), Adair Turner (Institute for New Economic Thinking), Matthew Whittaker (Resolution Foundation), Berthold Wigger (Karlsruhe Institute of Technology), Simon Wren-Lewis (University of Oxford)

- **Mini Conference: Labour Market Dynamics and the Macroeconomy**  
**Organisers: Charles Brendon (University of Cambridge) and Pontus Rendahl (University of Cambridge) (5<sup>th</sup> October 2016)**

This joint Cambridge-INET and CfM mini conference focused on the interactions between the dynamics underlying the labour market and its implications on the macroeconomy. Kurt Mitman (IIES Stockholm) provided empirical evidence as well as theoretical foundations for the extent to which unemployment benefit duration extensions during the financial crisis affected the large gyrations in the unemployment rate in 2008-2010. Mike Elsby (University of Edinburgh) provided evidence of how replacement hiring -- recruitment that seeks to replace positions vacated by workers who quit -- can give rise to a situation in which less vacancy posting in a recession yields a feedback mechanism which propagates itself, leading to a potentially large downturn. Lastly, Fabien Postel-Vinay showed that multidimensional characteristics of both workers and jobs can give rise to misallocations in the economy that previous policy suggestions have failed to address.

- **Cambridge IBSEN Workshop (21 March)**

The focus of the workshop was on large-scale experiments with human subjects. These experiments aimed at understanding complex social and economic phenomena such as financial bubbles, herding, cooperation in local community, and contagion and break down of trading and financial networks. The workshop brought together researchers working on experiments involving human interactions in groups or networks.

This workshop was co-organised with the EU H2020 IBSEN project on large scale experiments. (<http://ibsen-h2020.eu/>).

### **Seminars, Workshops and Reading Groups sponsored by C-INET (October 2016, March 2017):**

- **Kai Gehring (16 Mar) (University of Zurich) Empirical Microeconomics Seminar.** Title: 'Regional Resources and Democratic Secessionism'
- **Theory Workshop (16 Mar) – Matt Leduc.** Title: 'Networked Markets and Relational Contracts'
- **Horizon 2020 ADEMU Macro Reading Group (15 March)**
- **Dirk Bergemann (15 Mar) (Yale University) Microeconomics Seminar.** Title: 'Optimal Auction Design in a Common Value Model'
- **Macro Faculty Lunch (15 Mar) – Giammario Impullitti.** Title: "Innovation and Trade Policy in a Globalizing World"

- **Econometrics Workshop/Empirical Finance Reading group: Ryoko Ito (15 Mar)** ‘Modeling Time Series With Zero Observations’
- **Networks Working Group (10 Mar)** – Kaivan Munshi - Title: “Wealth, Marriage, and Sex Selection”
- **Theory Workshop (09 Mar)** – Claudia Herresthal - Title: 'Hidden Testing and Selective Disclosure of Evidence'
- **Horizon 2020 ADEMU Macro Reading Group (08 Mar)**
- **Networks Working Group (03 Mar)** - Frédéric Moisan - Title: Freedom of association, social cohesion and welfare
- **Theory Workshop (02 Mar)** – Pawel Gola - Title: 'On the Importance of Social Status for Labour Markets'
- **Networks Working Group (24 Feb)** – Francis Bloch - Title: Centrality measures in networks
- **Theory Workshop (23 Feb)** – Mikhail Safronov - Title: 'Active Learning in Job Assignment under Incomplete Contracts'
- **Horizon 2020 ADEMU Macro Reading Group (22 Feb)**
- **Econometrics Workshop/Empirical Finance Reading group: Marcelo Fernandes, QMC (22 Feb)** ‘Price Discovery and Market Microstructure Noise’
- **Networks Reading Group (17 Feb)** – Sihua Ding - Title: Centrality measures in networks
- **Econometrics Workshop/Empirical Finance Reading group: James Duffy, Oxford (15 Feb)** ‘Limit theory for nonlinear functions of ‘weakly nonstationary’ linear processes’
- **Econometrics Workshop/Empirical Finance Reading group: Andrew Chesher (08 Feb)** ‘Identification of Valuation Distributions in English Auctions’
- **Sergiu Hart (08 Feb) (The Hebrew University of Jerusalem) Faculty Microeconomics Seminar** - Title: Evidence Games: Truth and Commitment
- **Econometrics Workshop/Empirical Finance Reading group: Paolo Zaffaroni (01 Feb)** **Portfolio Choice with Model Misspecification: A Foundation for Alpha and Beta Portfolios'**
- **Theory Workshop (01 Dec)** – Matt Elliott - Title: "Technology Exchange Among Experts" (joint with Ben Golub)
- **Horizon 2020 ADEMU Macro Reading Group (30 Nov)** – Axel Gottfries: Lise, “On the job search and precautionary savings”
- **Macro Faculty Lunch (30 Nov)** – Maren Froemel - Title: “Multinational Production and International Diversification”
- **Networks Working Group (25 Nov)** – Matt Elliott - Title: Ranking Agendas for Negotiations
- **Theory Workshop (24 Nov)** – Sanjeev Goyal - Title: "Integration and Segregation"
- **Macro Faculty Lunch (23 Nov)** – Chris Rauh - Title: "Human Capital Production and Parental Beliefs"
- **Theory Workshop (17 Nov)** – Flavio Toxvaerd - Title: Regulatory Competition
- **Horizon 2020 ADEMU Macro Reading Group (16 Nov)** – Jan Kvasnicka - Title: Bhandar, Al, et al., "Taxes, Debts, and Redistributions with Aggregate Shocks"
- **Macro Faculty Lunch (16 Nov)** – Tim Uy - Title: Self-fulfilling Debt Restructuring
- **Empirical Finance Reading Group (14 Nov)** – Dario Palumbo – Title: "Conditional Euro Area Sovereign Default Risk". A paper from Lucas, Schwaab and Zhang"
- **Networks Reading Group (11 Nov)** – Sanjeev Goyal - Title: “The Great Game: Geography, Resources and Conquest”

- **Theory Workshop (10 Nov) – Christopher Harris** - Title: Firm-Specific Training
- **Wolfgang Härdle (09 Nov) (Humboldt-Universität zu Berlin) Faculty Econometrics Seminar**
- **Macro Faculty Lunch (09 Nov) – Joao Duarte** - Title: Why is Europe Falling Behind? Structural Transformation and Services Productivity Differences between Europe and the US
- **Empirical Finance Reading Group (07 Nov) – Michael Ashby** - Title: A Taxonomy of Anomalies and Their Trading Costs
- **Networks Working Group (4 Nov) – Robert Akerlof** - Title: "Network capital"
- **Theory Workshop (03 Nov) – Robert Evans** - Title: The Optimality of the Contrarian Adviser
- **Horizon 2020 ADEMU Macro Reading Group (2 Nov) – Moneca Petrescu**: Title: Campbell, Richard T. Ely Lecture, "Restoring Rational Choice: The Challenge of Consumer Financial Regulation"
- **Macro Faculty Lunch (02 Nov) – Jamil Nur** - Title: Match Quality and Labor Market Duality
- **Empirical Finance Reading Group (31 Oct) – Ondrej Tobek** - Title: Relationship of liquidity premium to size premium and momentum
- **Networks Working Group (28 Oct) – Gustavo Nicolas Paez** - Title: "International Production Structures, Productivity, and Income Differences"
- **Theory Workshop (27 Oct) – Juan Block** - Title: "Learning Dynamics Based on Social Comparisons"
- **Horizon 2020 ADEMU Macro Reading Group (26 Oct) – Samuel Mann**: Title: Eggertsson, Mehrotra and Summers, "Global Reserve Assets in a Low Interest Rate World Secular Stagnation in the Open Economy"
- **Empirical Finance Reading Group (24 Oct) – Soheil Mahmoodzadeh & Peter Malec**: Title: "Market Microstructure Invariance: Empirical Hypotheses" by Albert S. Kyle & Anna A. Obizhaeva
- **Networks Working Group (21 Oct) – Leonie Baumann** - Title: "Identifying the best agent in a network"
- **Theory Workshop (20 Oct) – Abhimanyu Khan** – Title: "Imitation in a differentiated market by price-competing firms"
- **Macro Faculty Lunch (19 Oct) – Jake Bradley** - Title: Labor Market Reforms: An Evaluation of the Hartz Policies in Germany
- **Empirical Finance Reading Group (17 Oct) – Simon Lloyd** - Title: "Estimating Nominal Interest Rate Expectations: Overnight Indexed Swaps and the Term Structure"
- **Networks Working Group (14 Oct) Willemien Kets (Northwestern)** - Title: "Challenging conformity: A case for Diversity"
- **Theory Workshop (13 Oct) Bartosz Redlicki (Cambridge)** - Title: "Spreading False Rumours"
- **Raphael Schoenle (12 Oct) (Brandeis University) Macroeconomics Seminar** - Title: "The Propagation of Monetary Policy Shocks in a Heterogeneous Production Economy " (with Ernesto Pasten and Michael Weber)
- **Macro Faculty Lunch (12 Oct) Petra Geraats (Cambridge)** - Title: Transparency of Monetary Policy in the Post-Crisis World (joined with Nergiz Dincer and Barry Eichengreen)
- **Empirical Finance Reading Group (10 Oct) - Launch**
- **Networks Working Group (7 Oct) Vladimir Mikhailov (CEU)** - Title: "Peer effects in social assimilation of migrants."

## Upcoming events 2017

- Workshop on Networks (21 April 2017), organised by Sanjeev Goyal and Leonie Baumann
- Mini conference: Political economics (4 May 2017), organised by Toke Aidt
- Labour Markets, Human Capital and Public Policy (9 May 2017), organised by Hamish Low and Kai Liu
- Panel Data Conference (May 23-24 2017), organised by Oliver Linton and cemmap
- International Economic Association Roundtable on The Economics of Religion (10-11 July 2017), organised by Sriya Iyer, Jared Rubin (Chapman University), Jean-Paul Carvalho (University of California, Irvine)
- Text, Herding and Sentiment (11- 13 September 2017), organised by Oliver Linton and Humboldt Uni Berlin
- FX Microstructure Master Class Alain Chaboud (October 2017), organised by Oliver Linton

## Visitors (October 2016 - March 2017)

- **Ozge Senay (University of St Andrews) (26 Feb - 19 Mar 2017)**
- **Alan Sutherland (University of St Andrews) (26 Feb -19 Mar 2017)**
- **Luca Dedola (European Central Bank) (15-17 March 2017)**
- **Adviser in DG-Research, Monetary Policy Research Division**
- **Riccardo Trezzi (Federal Reserve Bank) (15-17 March 2017)**

Host: Prof. Giancarlo Corsetti

- **Marcin Dziubinski (Warsaw University) (19 Feb - 26 Feb 2017)**
- **Francis Bloch (Paris School of Economics) (21 Feb -24 Feb 2017)**

Host: Sanjeev Goyal

- **Sergiu Hart (The Hebrew University of Jerusalem) (06 Feb - 09 Feb 2017)**

Host: Hamid Sabourian

- **Vera Zhao (Lancaster University Management School) (05 Feb - 08 Feb 2017) (student visitor)**
- **Wolfgang Härdle (Humboldt-Universität zu Berlin) (31 Jan - 03 Feb 2017)**
- **Chen Huang (Humboldt-Universität zu Berlin) (Feb 01 – 08 Feb 2017)**

Host: Oliver Linton

- **Glenn Magerman (ECARES, Université libre de Bruxelles) (10-13 January 2017)**

Host: Vasco Carvalho

- **Vladimir Mikhailov (Central European University) (1 Sept to 1 Dec) (student visitor)**

Host: Sanjeev Goyal

- **Wolfgang Härdle (Humboldt-Universität zu Berlin) (8-10 Nov)**

Host: Oliver Linton

- **Raphael Schoenle (Brandeis University) (10-14 Oct)**

Host: Vasco Carvalho/Pontus Rendahl

- **Willemien Kets (Northwestern University) (10-14 Oct)**

Host: Sanjeev Goyal

- **Kurt Mitman (IIES) (3-7 Oct)**

Host: Vasco Carvalho and Pontus Rendahl

## **Grants:**

**Ongoing grants: Horizon2020: ADEMU (Giancarlo Corsetti) and IBSEN (Sanjeev Goyal) – supported by C-INET**

**New Grant: Brexit (ESRC) Meredith Crowley and Giancarlo Corsetti – supported by C-INET**

## **Abstract of the new grant**

How will Brexit affect the development and growth of British manufacturing firms and corporates? Britain's popular referendum vote to exit from the European Union has created a great deal of uncertainty about the future of Britain's external trade relations with countries that belong to the European Union as well as with other major trading economies external to the EU, including the United States and China.

The imminent de-coupling of Britain's external trade policy from that of the EU raises a host of questions about the appropriate conduct of both trade and monetary policy to serve the needs of manufacturers located in Britain and the British population. For example, the EU (inclusive of Britain) currently has in place import restrictions on products that constitute roughly 7 percent of China's exports to the EU (Bown and Crowley, 2016). When Britain formally leaves the EU, the import protection afforded by these restrictions will disappear and Britain will have to decide whether it wants to re-institute new tariffs on these goods or go forward with a freer trade policy. Key to making a sound policy choice will be an understanding of the consequences of not only any tariff imposed by Britain, but also how the existence of the EU tariff will impact Britain's trade and domestic import-competing manufacturers who have been battered by intense global competition.

Questions pertinent to our research include: How much will the price of Britain's imports rise as a consequence of the pound's devaluation? How will the volume of its exports change when the relative price of its imported inputs increases and the relative price of its exports fall on world markets? Which industrial sectors will benefit the most from the competitive advantage in foreign markets arising from the pound's devaluation? How will a new EU or US import tariff on Chinese steel affect British steel manufacturers?



In order to predict the impacts of trade policy and exchange rate movements on important variables like import prices and export volumes, economic models need as inputs crucial parameters like the responsiveness (elasticity) of import prices to exchange rate movements and the responsiveness (elasticity) of British imports to changes in trade policy around the globe. How to identify and estimate these crucial parameters is an open research question in economics.

The proposed project will address these challenges by developing economic models and estimating key parameters of these models in order to answer these questions. To achieve this, we will develop the implications of Corsetti and Dedola (2005) and Bown and Crowley (2007), will build upon the existing methodologies in Bown and Crowley (2006, 2007) and Crowley, Song and Meng (2016), will build new and unique datasets and will develop novel methodologies where necessary to inform, in a timely fashion, new questions that are raised by Brexit.

To highlight the chapters of research relevant to corporate studies, the following paragraph describes the 3<sup>rd</sup> and 4<sup>th</sup> projects in the award:

**Project 3: Decomposing export price changes into mark-up and marginal cost components**

**Objectives and Contribution:** Through the innovative use of the sequential fixed effects methodology we will be the first paper on price responses to exchange rates that can identify changes in price mark-ups separately from changes in production costs. We will use information from multi-destination exporting firms to estimate the responsiveness of price mark-ups to changes in the various bilateral exchange rates in each of the firms' destination markets. Estimates from this model will enable us to generate predictions for how the prices of goods exported by foreign firms to Britain will respond to exchange rate movements under different future trade policies. Preliminary estimates suggest a mark-up elasticity that is slightly more than one-half the magnitude of a conventional pass through estimate.

**Project 4: A machine learning model of exchange rate and tariff pass through into export prices**

**Objectives and Contribution:** We will develop a machine learning model that identifies the key determinants of export price-setting by firms in response to exchange rate fluctuations and tariff changes. The model will identify important features of the firm's decision including the products they produce, the foreign markets they serve and the competitive structures in these markets. While previous research makes ad-hoc assumptions about the functions of the variables and the variables that determine price-setting by exporting firms, we propose an algorithm to identify non-parametric rules which will enable predictions on both how prices will change and how price responsiveness will change after a structural change in the economy – a distinctive methodological benefit when analysing situations of high uncertainty like Brexit.

### **Current Cambridge-INET Postdocs:**

- Leonie Baumann (Microeconomic theory, social and economic networks, and game theory)

- Juan Block (Microeconomic theory, in particular, repeated games and reputations, learning in games and evolutionary game theory)
- Abhimanyu Khan (Applied evolutionary game theory, networks, industrial organisation)
- Maren Froemel (Applied evolutionary game theory, networks, industrial organisation)
- Soheil Mahmoodzadeh (Market Microstructure, High Frequency Trading, Financial Economics)
- Miguel Morin (Macroeconomics and Economic History)
- Mikhail Safronov (Microeconomic Theory)
- Scott Swisher (Macroeconomics, networks, and economic history)
- Chen Wang (Large Random Matrices, Cointegration, Portfolio Choice)

#### **New Postdocs (start 1<sup>st</sup> September 2017):**

- Aubrey Clark (Harvard)
- Marco Valerio Geraci (Université libre de Bruxelles)
- Alexey Gorn (Bocconi Uni, Milan)

#### **Affiliated Postdocs:**

- Jake Bradley (Labour; search and matching models; structural estimation)
- Joao Duarte (Macroeconomics, Real Estate and Monetary Policy)
- Frederic Moisan (Game theory, behavioral economics, experimental economics, interactive epistemology, rationality, social preferences, cooperation, social networks, collective intentionality, social identity, moral psychology, logic)
- Jamil Nur (Labor Economics, Public Economics, Public Finance, Applied Microeconomics)
- Tim Uy (International Economics, Macroeconomics, Economic Growth and Development, Computational Methods, Networks)

#### **PhD students:**

- Jin Deng Keith Chan (Information, uncertainty and incentives) – joined Sept 2017
- Rafe Martyn (Transmission, mechanisms and economic policy)
- David Minarsch (Networks, crowds and markets)
- Ekaterina Smetanina (Forecasting, Volatility). Visited Duke University during Spring 2017
- Jeroen Dalderop (Asset Pricing, Microstructure). Visited Princeton University, Autumn, 2016

#### **Careers:**

##### **C-INET Postdocs and related Postdocs:**

- Peter Malec: Data Scientist at ERGO Group, Nuremberg
- Christopher Rauh: Assistant Professor, Université de Montréal
- Tim Uy: Senior Consultant at Deloitte, Chicago

##### **PhD students sponsored by C-INET**

- Anil Ari: Economist at the International Monetary Fund

- Jasmine Xiao: Assistant Professor, University of Notre Dame, Paris

### **Job market papers by Ph.D. students:**

#### **Anil Ari: Sovereign Risk and Bank Risk-Taking**

Abstract: I propose a general equilibrium macroeconomic model in which strategic interactions between banks and depositors may lead to endogenous bank fragility and default, associated with a persistent drop in investment and output. With some opacity in bank balance sheets, depositors form expectations about bank risk-taking and demand a return on bank deposits according to their risk. This creates strategic complementarities and possibly multiple equilibria: in response to an increase in funding costs, banks may optimally choose to pursue risky portfolios that undermine their solvency prospects. I bring the model to bear on the European sovereign debt crisis, in the course of which under-capitalized banks in default-risky countries experienced an increase in funding costs and raised their holdings of domestic government debt. The model is quantified using Portuguese data and accounts for macroeconomic dynamics in Portugal in 2010-2016. Policy interventions face a trade-off between alleviating banks' funding conditions and strengthening risk-taking incentives. Liquidity provision to banks may eliminate the good equilibrium when not targeted. Targeted interventions have the capacity to eliminate adverse equilibria.

#### **Jasmine Xiao: Corporate Debt Structure, Precautionary Savings, and Investment Dynamics**

Micro-level evidence indicates that firms which substituted bank loans with bond issues during the Great Recession did not experience a large contraction in their total borrowing, but they have hoarded more cash and experienced a slower recovery in investment than firms that did not substitute. This suggests that firms' balance sheet adjustment played a key role in the transmission of aggregate shocks. To evaluate the importance of this mechanism in the propagation of the Great Recession, I build a quantitative general equilibrium model of firm dynamics that jointly endogenizes the composition of borrowing on the liability-side, and the portfolio allocation between savings and investment on the asset-side. Bond issuances have lower intermediation costs than bank debt, but the latter can be restructured when firms are in financial distress. In response to a contraction in bank credit supply, firms substitute bank loans with bond issues and thus become more exposed to the risk of financial distress. This strengthens firms' precautionary incentive to increase cash holdings at the expense of investment, as they optimally trade-off growth against self-insurance via cash holdings. Model simulations suggest that this "precautionary savings" channel can account for 40 percent of the decline in aggregate investment in the first two years of the Great Recession, and more than one-half of the decline in the following five years.

### **Dissemination**

**Dissemination A. Please outline any specific plans you have for further publication and/or other means of dissemination of the outcomes and results of the research. B. Discuss any potential or actual impacts on policy and practice that your work may have.**

The working papers series are routinely submitted to leading international journals. An increasing number of them are currently being accepted for publication in top international journals. In addition, the Institute holds conferences, workshops, seminars, reading groups, and summer schools to disseminate the findings of research.

Cambridge-INET researchers' have started collaborating with the European Stability Mechanism, to develop models for the design and assessment of official lending and their impact on sovereign debt pricing. Cambridge INET researchers are contributing to positioning papers by the ESM.

Studies on secular stagnation and low interest rates by Cambridge-INET researchers' have also been an input in policy debates, with an ample circulated e-book, a working paper invited by the IMF Economic Review and a working paper written by in collaboration with a team at the Bank of England.

The ESRC sponsored project on Brexit will lead to strict collaboration with the Bank of England. We are in the process of obtaining large micro datasets on corporates that will provide the empirical basis for the analysis of product pricing in the post-brexit environment.

## **Outputs**

**Please give full details of the outputs which should accompany this report. For each research paper, please, provide: a) the title b) an abstract c) web link where the paper can be downloaded d) bibliographical reference in case the paper is accepted for publication e) details regarding conferences or seminars where the paper has been presented For other outputs (such as software, datasets), please, provide a description of the output and a web link through which the output can be downloaded. If a web link is not available then provide an electronic copy with this report.**

### **Working papers:**

#### **2017**

[Aggregating Elasticities: Intensive and Extensive Margins of Female Labour Supply](#), Orazio Attanasio, Peter Levell, Hamish Low and Virginia Sanchez-Marcos (wp1705)

\*\*\* [Why is Europe Falling Behind? Structural Transformation and Services' Productivity Differences between Europe and the U.S.](#), Cesare Buiatti, Joao B. Duarte and Luis Felipe Sáenz (wp1704)

[Holy Wars? Temple desecrations in Medieval India](#), Sriya Iyer, Anand Shrivastava and Rohit Ticku (wp1703)

[The Strategy of Conquest](#), Marcin Dziubinski, Sanjeev Goyal and David E. N. Minarsch (wp1702)

\*\*\* [A Discrete Choice Model For Large Heterogeneous Panels with Interactive Fixed Effects with an Application to the Determinants of Corporate Bond Issuance](#), Lena Boneva and Oliver Linton (wp1701)

#### **2016**

[How Fundamentalism Takes Root: A Simulation Study](#), Daniel Friedman, Jijian Fan, Jonathan Gair, Sriya Iyer, Bartosz Redlicki, Chander Velu (wp1628)

\*\*\* [Macroeconomic Stabilization, Monetary-fiscal Interactions, and Europe's monetary Union](#), Giancarlo Corsetti, Luca Dedola, Marek Jarociński, Bartosz Maćkowiak and Sebastian Schmidt, (wp1627)

\*\*\* [A Coupled Component GARCH Model for Intraday and Overnight Volatility](#), Oliver Linton and Jianbin Wu, (wp1626)

\*\*\* [Supply Chain Disruptions: Evidence from the Great East Japan Earthquake](#), Vasco M. Carvalho, Makoto Nirei, Yukiko U. Saito and Alireza Tahbaz-Salehi, (wp1625)

[Experimentation and Learning-by-Doing](#), Mikhail Safronov, (wp1624)

\*\*\* [Corporate Debt Structure, Precautionary Savings, and Investment Dynamics](#), Jasmine Xiao, (wp1623)

\*\*\* [Sovereign Risk and Bank Risk-Taking](#), Anil Ari, (wp1622)

\*\*\* [Estimation of a Multiplicative Covariance Structure in the Large Dimensional Case](#), Christian M. Hafner and Oliver Linton, (wp1621)

\*\*\* [Falling Real Interest Rates, House Prices, and the Introduction of the Pill](#), Jason Lu and Coen Teulings, (wp1620)

[Birth and Death](#), Partha Dasgupta, (wp1619)

\*\*\* [Investment in Productivity and the Long-Run Effect of Financial Crises on Output](#), Maarten de Ridder (wp1618)

[Narrow Identities](#), Partha Dasgupta and Sanjeev Goyal (wp1617)

[Networks and Markets](#), Sanjeev Goyal (wp1616)

[The Earned Income Tax Credit: Targeting the Poor but Crowding Out Wealth](#), Maren Froemel and Charles Gottlieb (wp1615)

[The Impact of Earthquakes on Economic Activity: Evidence from Italy](#), Francesco Porcelli and Riccardo Trezzi (wp1614)

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[A Coasian Approach to Efficient Mechanism Design](#), Mikhail Safronov, (wp1603). Revised September 2016

\*\*\* [Financial Linkages, Portfolio Choice and Systemic Risk](#), Andrea Galeotti, Christian Ghiglino, and Sanjeev Goyal (wp1602)

[Religion and Depression in Adolescence](#), Jane Cooley Fruehwirth, Sriya Iyer and Anwen Zhang, (wp1601)

\*\*\* Working papers with a focus on economics and finance

## Published papers:

### 2017

[Networks, Markets and Inequality](#), Sanjeev Goyal, *American Economic Review*, Vol 107, No 1, pp 1-30.

[How do you defend a network?](#), by Marcin Dziubinski and Sanjeev Goyal, *Theoretical Economics*, Vol 12, No 1 pp 331-376.

### 2016

[Information Acquisition and Exchange in Social Networks](#), Sanjeev Goyal, Stephanie Rosenkranz, Utz Weitzel, and Vincent Buskens, forthcoming in *Economic Journal*

[Favoritism](#), Yann Bramoullé and Sanjeev Goyal, *Journal of Development Economics*, Vol 122, pp 16-27.

\*\*\*[The cross-quantilogram: Measuring quantile dependence and testing directional predictability between time series](#), Heejoon Han, Oliver Linton, Tatsushi Oka and Yoon-Jae Whang, *Journal of Econometrics*, Vol 193, Issue 1, pp 251-270.

\*\*\*[Networks and Misallocation: Insurance, Migration, and the Rural-Urban Wage Gap](#), Kaivan Munshi and Mark Rosenzweig, *American Economic Review*, Vol 106, no 1, pp 46-98.

[Network Cognition](#), Roberta Dessi, Edoardo Gallo and Sanjeev Goyal, *Journal of Economic Behavior and Organization*, Vol 123, pp 78-96.

[The New Economics of Religion](#), Sriya Iyer, *Journal of Economic Literature*, Vol. 54, No. 2, pp. 395-441.

[Trading in networks: Theory and Experiments](#), Syngjoo Choi, Andrea Galeotti and Sanjeev Goyal, *Journal of the European Economic Association*

[The "Mystery of the Printing Press" Monetary Policy and Self-fulfilling Debt Crises](#), Giancarlo Corsetti and Luca Dedola, forthcoming in the *Journal of European Economic Association*

\*\*\*[Fiscal Policy in an Unemployment Crisis](#), by Pontus Rendahl, forthcoming in *Review of Economic Studies*.

\*\*\* Articles with a focus on economics and finance

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**Major difficulties** Please detail below any major difficulties, scientific or administrative/logistical, encountered during your research and comment on any consequent impact on the project. Provide details including any advice you might have for resolving such problems in future projects. **Other issues and unexpected outcomes** Please describe any outcomes of your research, beneficial or otherwise that were not expected at the outset or other issues which were important to the research. If there are none, please state so.

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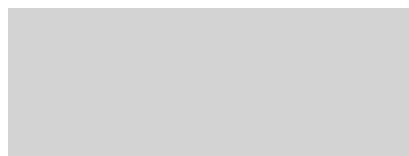
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