



€ABCN

Euro Area Business Cycle Network

2020 ANNUAL REPORT

1 OCTOBER 2019 – 30 SEPTEMBER 2020

EURO-AREA BUSINESS CYCLE NETWORK
33 Great Sutton Street, London, EC1V 0DX

For the **Annual Steering Committee Meeting 2020**

Hosted by the Centre for Economic Policy Research, Online

CONTENTS

Contents.....	2
1. Introduction.....	3
Executive Group.....	3
The Scientific Committee.....	3
The Steering Committee.....	4
EABCN Institutional Members.....	4
Network Coordinator.....	5
Centre for Economic Policy Research (CEPR).....	5
Euro Area Business Cycle Dating Committee (EABCDC).....	5
Current Committee members.....	5
Report on Activities.....	5
2. Recent Events.....	6
Conferences.....	6
Training Schools.....	7
3. Future Events.....	8
Conferences.....	8
Training Schools.....	9
Other Events.....	9
4. Financial Report 2019-2020.....	10
5. Management and Administration of EABCN – Indirect costs.....	11
6. EABCN Website.....	12
7. Feedback on Events.....	13
CONTINUOUS-TIME METHODS IN MACROECONOMICS.....	13
FISCAL POLICY: ESTIMATING CAUSAL EVIDENCE AND POSITIVE THEORY.....	15
CONFERENCE ON EMPIRICAL ADVANCES IN MONETARY POLICY.....	18
8. Event Programmes.....	21

1. INTRODUCTION

The Euro Area Business Cycle Network (EABCN) provides a forum for the better understanding of the business cycle in the euro-area, by linking academics and researchers in central banks and other policy institutions involved in its empirical analysis. The Network was launched officially on 1 April 2002. The first EABCN Steering Committee meeting, hosted by Banca d'Italia in September 2002, ratified the Network's organisational structure and approved its ability to spend network funds. EABCN currently consists of 23 institutional members and over 1,700 individual members.

Its organisational structure consists of an Executive Group, a Scientific Committee and a Steering Committee.

EXECUTIVE GROUP

The Executive Group consists of the Chair of the Steering Committee, the Chair of the Scientific Committee and a senior representative of CEPR. The Executive Committee reports to the Steering Committee and approves deviations from the budget during the year. Significant changes to the budget are communicated to the Steering Committee and approved by written procedure. The CEPR President is its representative on the Executive Group; the CEPR CEO stands in for the President when they are not available.

THE SCIENTIFIC COMMITTEE

The Scientific Committee consists of the Chair, Vice-Chair and the EABCN Network Co-ordinator.

Barbara Rossi is Chair of the Scientific Committee. She is an ICREA Professor of Economics at UPF and Barcelona GSE Affiliated Professor. Barbara was previously Associate Professor with tenure at the Department of Economics at Duke University, after earning her PhD from Princeton University. She is a CEPR Research Fellow and a Director of the International Association of Applied Econometrics.

Klaus Adam is Vice-Chair of the Scientific Committee. He is Professor of Economics at Nuffield College, University of Oxford, Research Professor at the Deutsche Bundesbank, a CEPR Research Fellow and an Associate Editor of the Journal of Monetary Economics. Before joining Oxford, he held a Chair at Mannheim and was Principal Economist at the Monetary Policy Research Division of the ECB. Klaus obtained his PhD from the European University Institute in Florence and has held Assistant Professorships at the University of Salerno and Goethe University in Frankfurt.

The Network Coordinator, **Eleonora Granziera**, works in collaboration with the Chair and Vice-Chair of the Scientific Committee and the relevant CEPR staff to facilitate planned network activities. The Network Co-ordinator works to ensure activities occur on schedule and to a high scientific standard. Dr Granziera is a Research Economist at Norges Bank and Senior Economist on leave at the Bank of Finland.

THE STEERING COMMITTEE

The Steering Committee consists of representatives of all institutional members and meets annually to approve the EABCN budget and discuss the annual report.

Luc Laeven is the Chair of the Steering Committee. Dr Laeven is Director-General of DG Research at the ECB and has previously worked for the IMF and World Bank. He obtained his PhD in Economics from the University of Amsterdam. His fields of interest are Macro-Finance, International Finance, Corporate Finance and Financial Intermediation.

EABCN INSTITUTIONAL MEMBERS

EABCN currently has 24 institutional members. The newest member who joined in 2020 is the South African Reserve Bank. Each member has a single representative on the EABCN Steering Committee.

Banca d'Italia
Francesco Zollino

Banco de España
Eva Ortega

Banco de Portugal
António Antunes

Bank of England
Stephen Millard

Bank of Finland
Adam Gulan

Banka Slovenije
Martin Wagner

Banque Centrale du Luxembourg
Paolo Guarda

Banque de France
Yannick Kalantzis

Banque Nationale de Belgique
Hugues Fameree

Central Bank & FSA of Ireland
Fiona Farrelly

Czech National Bank
Jan Brůha

Danmarks Nationalbank
Federico Ravenna

De Nederlandsche Bank
Peter van Els

Deutsche Bundesbank
Emanuel Mönch

DG ECFIN
Björn Doehring

European Central Bank
Luc Laeven

Magyar Nemzeti Bank
Adam Reiff

Narodowy Bank Polski
Tomasz Łyziak

National Bank of Ukraine
Mihnea Constantinescu

Norges Bank
Knut Are Aastveit

Oesterreichische Nationalbank
Doris Ritzberger-Gruenwald

South African Reserve Bank
Konstantin Makrelov

Schweizerische Nationalbank
Nicolas Cuche-Curti

Sveriges Riksbank
Ulf Söderström

NETWORK COORDINATOR

CENTRE FOR ECONOMIC POLICY RESEARCH (CEPR)

The Centre for Economic Policy Research acts as the Network's secretariat by handling administrative tasks such as receiving and dispersing funds; organising meetings; processing expense claims; and maintaining the website. Some of these tasks are done in cooperation with the Network Co-ordinator. CEPR also produces the Annual Report which is circulated in advance of the annual Steering Committee Meeting. It reports on events, members, finances, the website and feedback.

The point of contact at CEPR for EABCN inquiries is **Monika Tsvetkova**, Projects Lead (mtsvetkova@cepr.org) unless stated otherwise (for example, concerning a specific conference or training school).

EURO AREA BUSINESS CYCLE DATING COMMITTEE (EABCDC)

CEPR and EABCN have partnered to jointly support and expand the activities of the Euro Area Business Cycle Dating Committee (EABCDC). The Committee pursues its dating of the troughs and peaks of euro area business cycles. It will also launch a series of research initiatives destined to monitor and better understand aggregate economic developments in the euro area.

EABCDC, which is composed of five CEPR researchers, establishes the chronology of recessions and expansions of the eleven-original euro-area member countries plus Greece for 1970-1998, and the entire euro area from 1999 onwards.

CURRENT COMMITTEE MEMBERS

- Philippe Weil, (Chair, 2012-), 2003-, ULB and CEPR
- Refet Gürkaynak, (Vice Chair, 2019-) 2012-, Bilkent University and CEPR
- John Fernald, 2019-, INSEAD, Federal Reserve Bank of San Francisco and CEPR
- Evi Pappa, 2019-, Universidad Carlos III de Madrid and CEPR
- Antonella Trigari, 2019-, Bocconi University and CEPR

REPORT ON ACTIVITIES

30 April 2020: The Dating Committee issued its spring statement in the midst of the Covid-19 pandemic, and noted it was too early to rule out the possibility of a double-peak expansion punctured by a sharp but temporary drop-in euro area activity.

2 September 2020: The Dating Committee declared that the euro area expansion that had started after the 2013Q4 trough had reached a peak in 2019Q4. It noted that the magnitude of the shock suffered by the euro area and the marked changes that accompany the current downturn, notably in terms of labour market disruptions and novel fiscal and monetary policy dynamics, guarantee that the current recession

is not a brief interruption in a double-peak expansion but a cyclical episode of its own, as will be the following expansion.

2. RECENT EVENTS

This report covers activities that either took place in the period 1 October 2019 – 30 September 2020 or were intended but needed to be postponed by a few months.

2020 was marked by the Covid-19 pandemic, which led to a profound transformation in the way businesses work and scientific events are organised. The spread of the virus also affected EABCN by making travel and face-to-face meetings impossible. As a result, the Network postponed two of its planned events to 2021, while successfully organising two training schools and one conference online.

For the organisation of the conference and training schools, CEPR used the Zoom platform. CEPR's events team managed all logistical aspects of online meetings, from the concept stage to pre-event marketing and hosting of the meeting, to post-event communications.

Participants gave positive feedback to the meetings hosted online. A summary of the evaluation forms can be found in Section 7, and the programmes of all events are available at the end of this report.

One advantage of moving the events online is that they reached a far wider audience, as can be seen in the event descriptions below.

CONFERENCES

“EMPIRICAL ADVANCES IN MONETARY POLICY”

BANK OF FRANCE

ONLINE, 26-28 OCTOBER 2020

The conference was planned to take place in Paris, on the 6-7 May 2020, however it was postponed to late October 2020 due to the Covid-19 outbreak.

Simon Gilchrist (New York University), Ricardo Reis (London School of Economics and CEPR) and Stephanie Schmitt-Grohe (Columbia University and CEPR) were among the speakers.

The conference covered a broad range of themes related to empirical aspects of monetary policy:

- Measuring the effects of monetary policy on the macroeconomy
- Identifying the transmission channels of monetary policy
- International monetary policy channels
- Communication strategies, the role of expectations and forward guidance
- Risks associated with uncertainty and to the normalisation of monetary policy
- Monetary policy and financial markets
- Effects of monetary policy on firm expectations and decisions

The conference was very well attended – 421 registered for the event, and 302 people actually participated. The call for papers attracted 189 submissions, and 19 papers were included in the programme. Additionally, 12 poster-sessions were organised.

The **International Research Forum on Monetary Policy** organised by the European Central Bank (26-27 March 2020) was unfortunately cancelled due to the pandemic.

The EABCDC Conference **Finding the Gap: Output Gap Measurement in the Euro Area** was postponed to 2021.

TRAINING SCHOOLS

FISCAL POLICY: ESTIMATING CAUSAL EVIDENCE AND POSITIVE THEORY

UNIVERSITY OF MANNHEIM

ONLINE, 4-5 MAY 2020

This training school was taught by **Morten O. Ravn** (University College London & CEPR).

Since the Global Financial Crisis, there has been a resurgence of interest in fiscal policy amongst both academics and policymakers. A question of central interest is the causal impact of fiscal policy shocks and, in particular, the dynamic causal effects. As with monetary policy, the main obstacle to producing such evidence is that changes in fiscal policy instruments are to a large extent endogenous. This course looked into methods available for confronting such endogeneity and discussed applications. It examined how to confront issues such as anticipation effects, heterogeneity (across the population), and state dependence (time permitting). The course also connected the results to economic theory and looked into positive theories of fiscal policy.

The course attracted over 51 applications, of which 41 participants were selected.

CONTINUOUS-TIME METHODS IN MACROECONOMICS (WITH APPLICATIONS TO HETEROGENEOUS MODELS)

ONLINE, 30 SEPTEMBER – 2 OCTOBER 2020

This training school was taught by **Jesus Fernandes-Villaverde** (University of Pennsylvania & CEPR) and **Galo Nuño** (Bank of Spain). The instructors of this course introduced the leading tools, as well as recent advances, in continuous-time methods in macroeconomics, with a focus on their application to Heterogeneous Agent models.

The training school had over 130 applications for participation. Thanks to the online format of the event, the organisers could accommodate a larger number of participants than usual – 93 attendees.

The training school on **Recent Developments in Forecasting**, hosted by Banca d'Italia, was postponed to 2021.

3. FUTURE EVENTS

The Network is hoping to be able to hold all events that were postponed from 2020 in 2021. In addition, the EABCN Scientific Committee is planning two conferences and two new training schools, which brings the number of events in 2021 to six (three conferences and three training schools).

Further details on future events are given below and will be available on the EABCN website in due course.

CONFERENCES

EABCDG CONFERENCE

FINDING THE GAP: OUTPUT GAP MEASUREMENT IN THE EURO AREA

EUROPEAN UNIVERSITY INSTITUTE, FLORENCE/ ONLINE

APRIL 2021

The **Euro Area Business Cycle Dating Committee** conference on potential output and output gap measurement, which was supposed to take place in April 2020, will now take place in 2021. The organisers are particularly interested in including papers that can shed light on how theoretical and statistical concepts of potential output and the output gap relate and how to measure them in practice. The focus is the Euro Area – either taken as a whole or, possibly, for different constituent countries. It would also be of great interest to the Dating Committee to have estimates on the relationship between cyclical fluctuations extracted with different methods and gaps.

ECONOMIC POLICY AND FORECASTING IN UNCERTAIN TIMES

ONLINE

MAY 2021

More details on this event will be available soon.

MONETARY POLICY AND CLIMATE CHANGE

UNIVERSITY OF MANNHEIM

SEPTEMBER 2021

More details on this event will be available soon.

TRAINING SCHOOLS

RECENT DEVELOPMENTS IN FORECASTING

BANK OF ITALY

TBC, 2021

The school will be led by **Graham Elliott** (University of California San Diego) and **Allan Timmermann** (University of California San Diego & CEPR). The organisers are hoping to be able to hold a physical meeting in 2021.

The course will introduce participants to a variety of advanced topics and recent developments in economic forecasting. The training school will also look at a large number of potential predictors. Much work has been undertaken in econometrics, statistics and computer science in recent years. The tutors will provide a framework to explain how some of the popular methods work and their properties.

The course will also cover forecast evaluation, forecast comparisons, and monitoring of forecasting performance.

BELIEFS AND SOCIAL NETWORKS

UNIVERSITY OF MANNHEIM

14-17 JUNE; 25 JUNE 2021

The school will be led by **Johannes Stroebel** (NYU). The course will be divided into four lecture sessions taught over four days, followed by a practice/presentation session the following week.

More details will follow in due course.

EMPIRICAL ANALYSIS OF BUSINESS CYCLES

TBC, 2021

The school will be led by **James Morley** (University of Sydney). More details will follow in due course.

OTHER EVENTS

ANNUAL EABCN STEERING COMMITTEE MEETING

EUROPEAN CENTRAL BANK,

ONLINE, 17 DECEMBER 2020

The annual Steering Committee for the EABCN network will be organised by CEPR online via Zoom. Institutional members will discuss the previous year's activities and how to move forward in the next year.

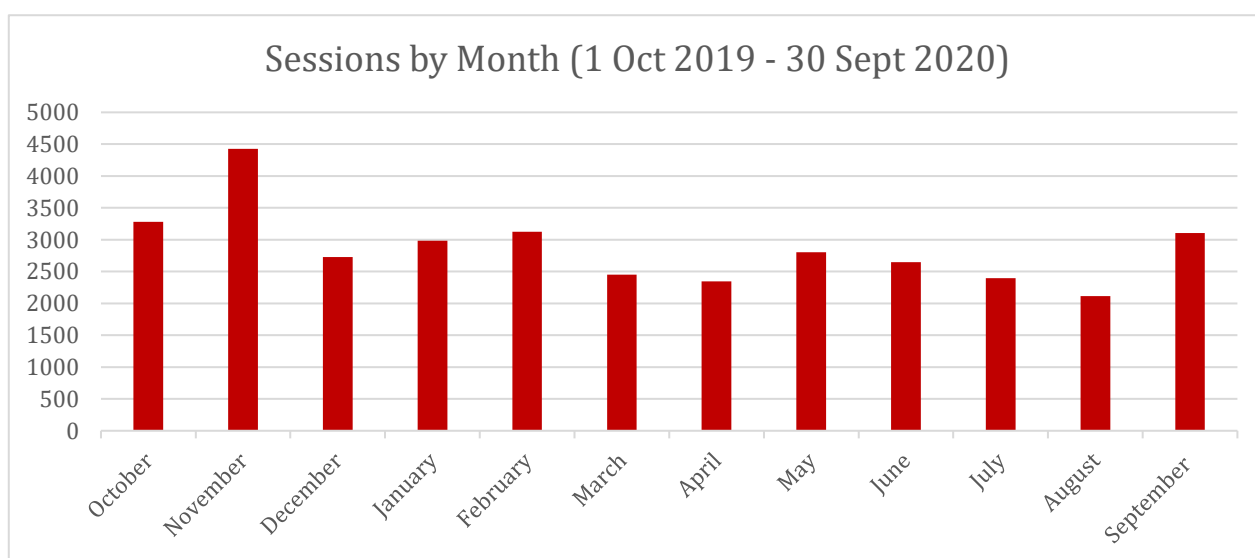
6. EABCN WEBSITE

Data on the number and length of visits to the EABCN website is provided below. The data is gathered from EABCN's Google Analytics account and represents the period 1 October 2019 – 30 September 2020.

Total Sessions*	34,403
Average visit length	1 minute, 10 seconds
Average pages per visit	1.87

*One 'session' is recorded as someone visiting the website regardless of the number of pages they view.

While the average visit length and pages per visit have fractionally increased compared to 2018-2019, there has been a 19% decrease in the total number of sessions due to the lower number of events.



SOURCES OF TRAFFIC

The great majority of website visits come from search engines like Google (23,112). The direct visits (a user typing the EABCN domain address) were 8,710. The remaining visits came from other sources. The top other sources were:

1. CEPR.org
2. Uni Bocconi
3. Banque de France
4. Wikipedia
5. Mailchimp
6. VoxEU
7. Facebook

7. FEEDBACK ON EVENTS

CONTINUOUS-TIME METHODS IN MACROECONOMICS

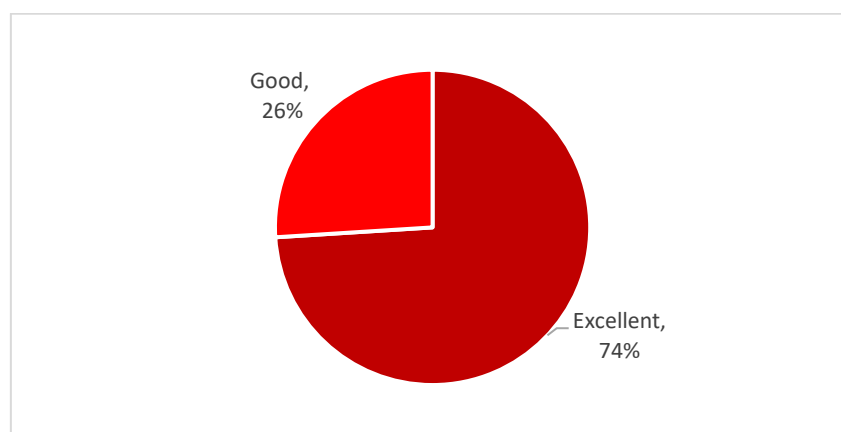
ONLINE, 30 SEPTEMBER – 2 OCTOBER 2020

ORGANISATION OF TRAINING SCHOOL

The impact of COVID-19 meant that this training school took place online. However, this shift to a digital training school was not detrimental to participants' ability to access this learning opportunity.

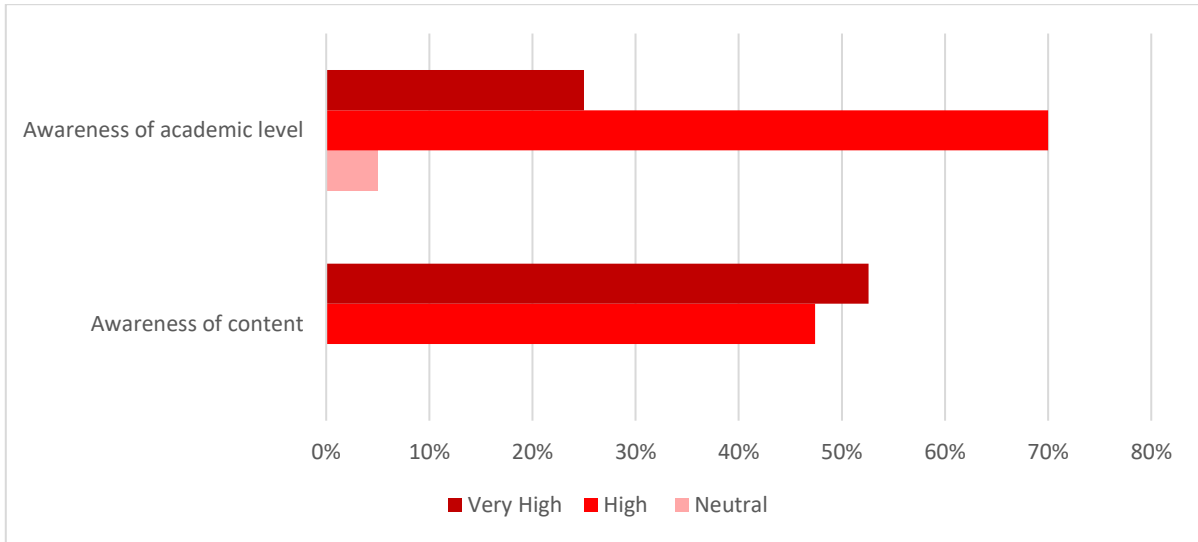
- Participants still rated the pre-meeting organisation highly, with a majority selecting Excellent (70%) and the remainder choosing Good (30%).
- The majority of participants rated the ease of using the online platform Zoom as Excellent (95%), with the remaining selecting Good (5%).
- Participants rated the quality of the sound and video as either Excellent (35%) or Good (65%).

Despite the organisational challenges of hosting the training school online, participants rated the overall organisation of the school very highly:



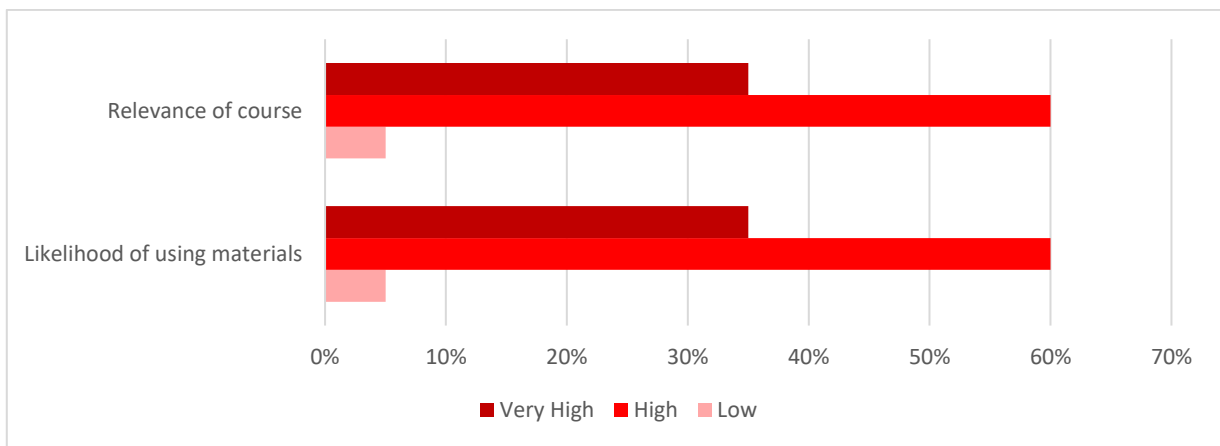
PARTICIPANT EXPECTATIONS

Participant feedback on the information provided online about the training school, including its academic level and content, suggests that most participants' expectations of the training school were fulfilled. All participants indicated that there was sufficient information on the website. The feedback on participant awareness of academic level and content is as follows:



PARTICIPANT EXPERIENCE

While the feedback form does not include a specific rating for the overall experience of the training school, other feedback results indicate that the participants had a positive experience. Notably, most participants rated the training school as relevant to their personal needs, and the rating for their likelihood of using the school materials in the future was also high.



When asked to rank how useful the course materials, networking, and knowledge exchange with peers and lecturers were, 80% of the participants rated the course materials as the most beneficial aspect. Knowledge exchange with peers and lecturers was most commonly ranked second (60% of responses), and networking was most commonly ranked third (65% of responses).

The participants' experience of the teaching on the training school was very positive, with 90% of participants rating the lecturers' expertise as Very High and the remaining 10% selecting High.

In another positive indicator of participant experience of the training school, the participants rated the likelihood of attending:

- Other training schools as Very High (55%), High (40%), or Neutral (5%).
- Other EABCN events as Very High (50%), High (40%), or Neutral (10%).

PARTICIPANT RECOMMENDATIONS

The main pieces of feedback participants provided for future iterations of this training school were:

- To allocate time to exercises or tutorials, especially with Matlab, that could give participants practical implementation experience.
- To structure the online version of the training school to allow for discussions outside of the main group (such as in breakout rooms), so participants can network, and the main group is focused on the core content.

In their feedback, participants suggested the following topics as future focuses of EABCN training schools:

- Behavioural macroeconomics
- Coding sessions
- DSGE models and possibly HANK models
- Macro-finance
- Models with Heterogeneous Interacting Agents
- Networks in macro
- Using household and firm-level data in macroeconomic research

FISCAL POLICY: ESTIMATING CAUSAL EVIDENCE AND POSITIVE THEORY

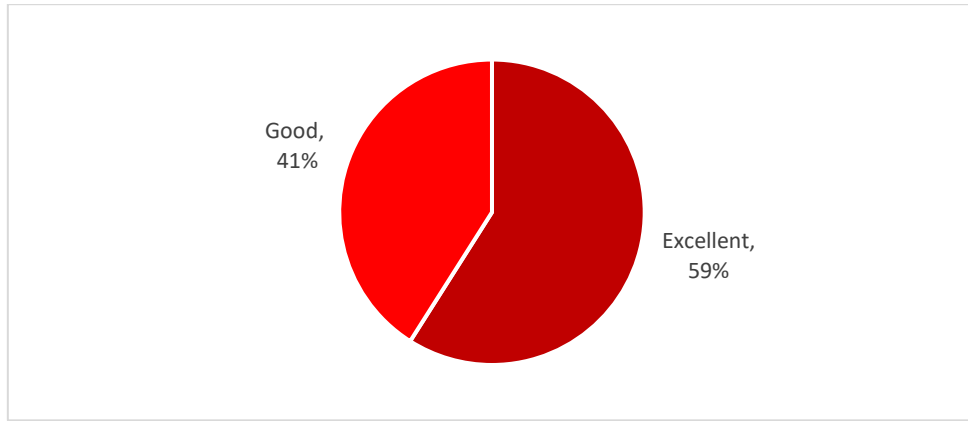
ONLINE, 3-4 MAY 2020

ORGANISATION OF SCHOOL

The impact of COVID-19 necessitated meant that this training school took place online. However, this shift to a digital training school was not detrimental to participants' ability to access this learning opportunity.

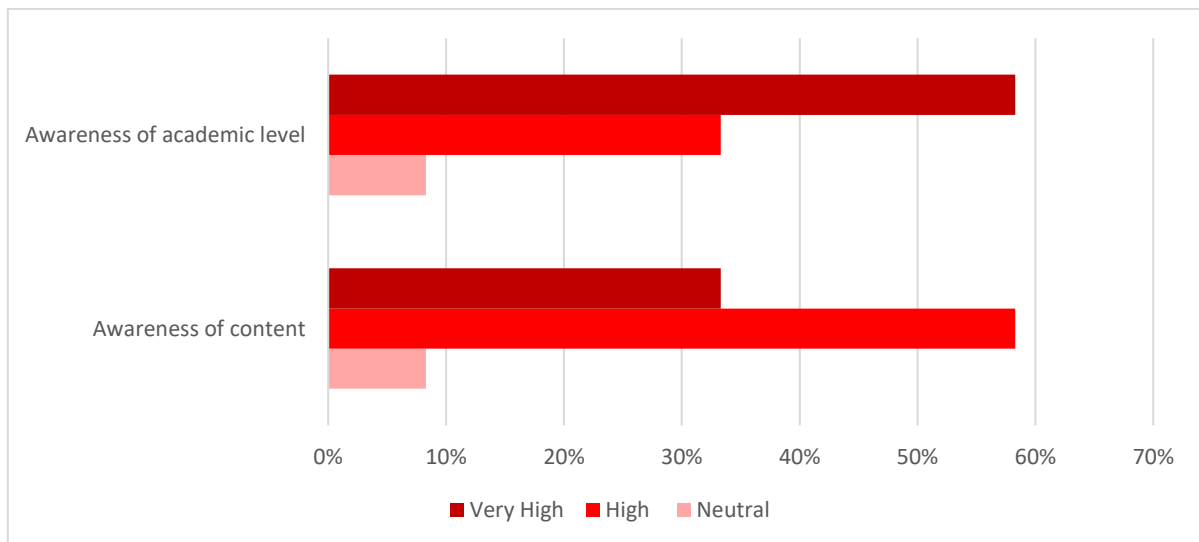
- Participants still highly rated the pre-meeting organisation, with majority selecting Excellent (75%) and the remainder choosing Good (16.7%) or Fair (8.3%).
- Participants rated the ease of using the online platform Zoom as either Excellent (58.3%) or Good (41.7%).
- Participants rated the quality of the sound and video as either Excellent (41.7%), Good (50%) or Fair (8.3%).

Despite the organisational challenges of hosting the training school online, participants highly rated the overall organisation of the school:



PARTICIPANT EXPECTATIONS

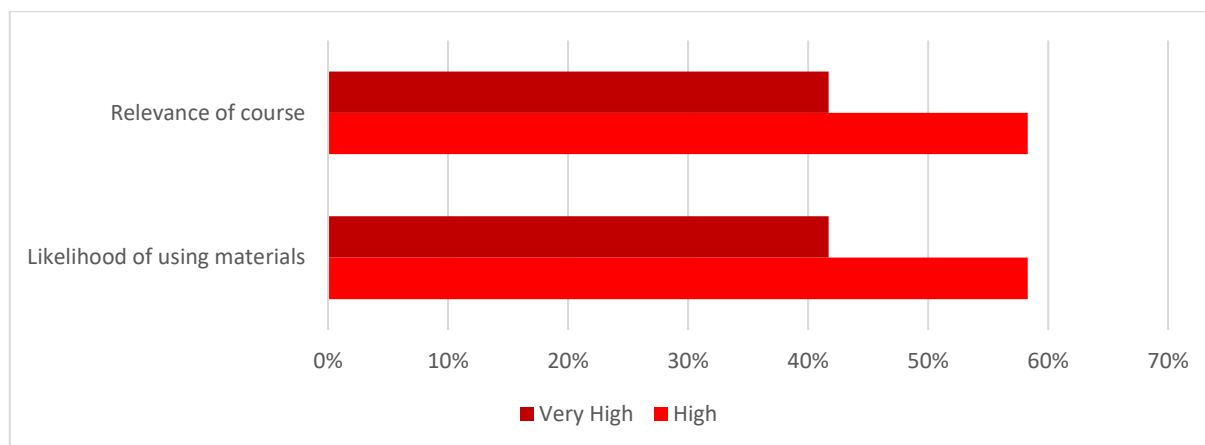
The participant feedback on the information provided online about the training school, including its academic level and content, suggests that most participants' expectations of the training school were accurate. Only one participant indicated that there had not been sufficient information on the website. The feedback on participant awareness of academic level and content is as follows:



The participant who indicated that their awareness of the academic level and content of the training school was Neutral expressed that they were confused by the phrasing on the feedback form. They rated all other feedback categories very highly.

PARTICIPANT EXPERIENCE

While the feedback form does not include a specific rating for overall experience on the training school, other feedback results indicate that the participants had a positive experience. Notably, the participants rated the training school as highly relevant to their personal needs, and the rating for their likelihood of using the school materials in the future was also high.



When asked to rank how useful the course materials, networking, and knowledge exchange with peers and lecturers were, all but one participant ranked the course materials as the most useful aspect. The aspects of networking and knowledge exchange with peers and lecturers split the second and third rankings.

The participants' experience of the teaching on the training school was mixed. While every participant rated the lecturer's expertise as Very High, the feedback on the quality of the TA sessions was split between Very High (41.7%), High (25%), Neutral (16.7%), and Low (16.7%).

In another positive indicator of participant experience, all but one participant indicated that likelihood of them attending another training school or a different EABCN event was Very High (75%) or High (25%). The remaining participant commented that given the levels of uncertainty in current circumstances assessing the likelihood of attending other events was very hard.

PARTICIPANT RECOMMENDATIONS

The main piece of feedback participants provided for future iterations of this training school was to include more hands-on exercises on empirical methods, despite this being more difficult in an online setting.

In their feedback, participants suggested the following topics as future focuses of EABCN training schools:

- Empirical international macroeconomics and finance
- Empirical macro-finance
- Financial regulation
- Heterogeneous agents
- Numerical methods for solving non-linear DSGE models
- Unconventional monetary policies

CONFERENCE ON EMPIRICAL ADVANCES IN MONETARY POLICY

CONFERENCE ATTENDANCE

The attendees who completed the conference survey were 29% presenters and 71% general participants. These attendees identified themselves as 74% academics, 21% employees of a government or central bank, and 5% students. Attendees had heard of the conference through a variety of sources, including:

- Email from EABCN/CEPR administrator (50%)
- Banque de France website (12%)
- Friend/Colleague (12%)
- EABCN/CEPR website (6%)
- Macroeconometrics.net (6%)
- econbiz.de (6%)
- Do not know/remember (6%)

In terms of attendance, 53% of attendees came to all three days of the conference. Overall, day one had a 94% attendance rate and days two and three both had a 76% attendance rate.

CONFERENCE ORGANISATION

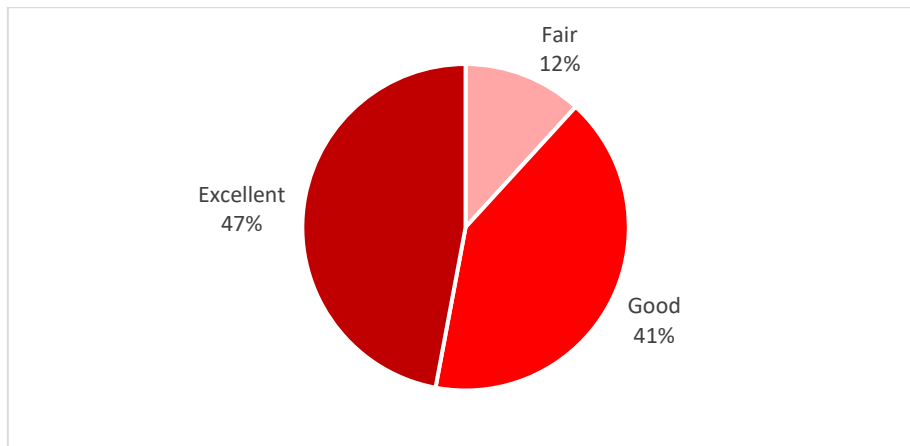
The impact of COVID-19 necessitated holding the conference online. However, this was not detrimental to attendees accessing the conference.

- All attendees indicated that they received sufficient information about the contents of the event from either the EABCN or CEPR website.
- The pre-meeting organisation was well rated by attendees, with majority selecting either Excellent (50%) or Good (31%), and the remainder choosing Fair (6%). This question was not applicable to 12% of attendees.
- Attendees rated the ease of using the online platform as either Excellent (59%), Good (29%) or Fair (12%).

Regarding the format of the conference, both the structure of the main programme sessions and the format and number of the poster sessions were well rated by the attendees.

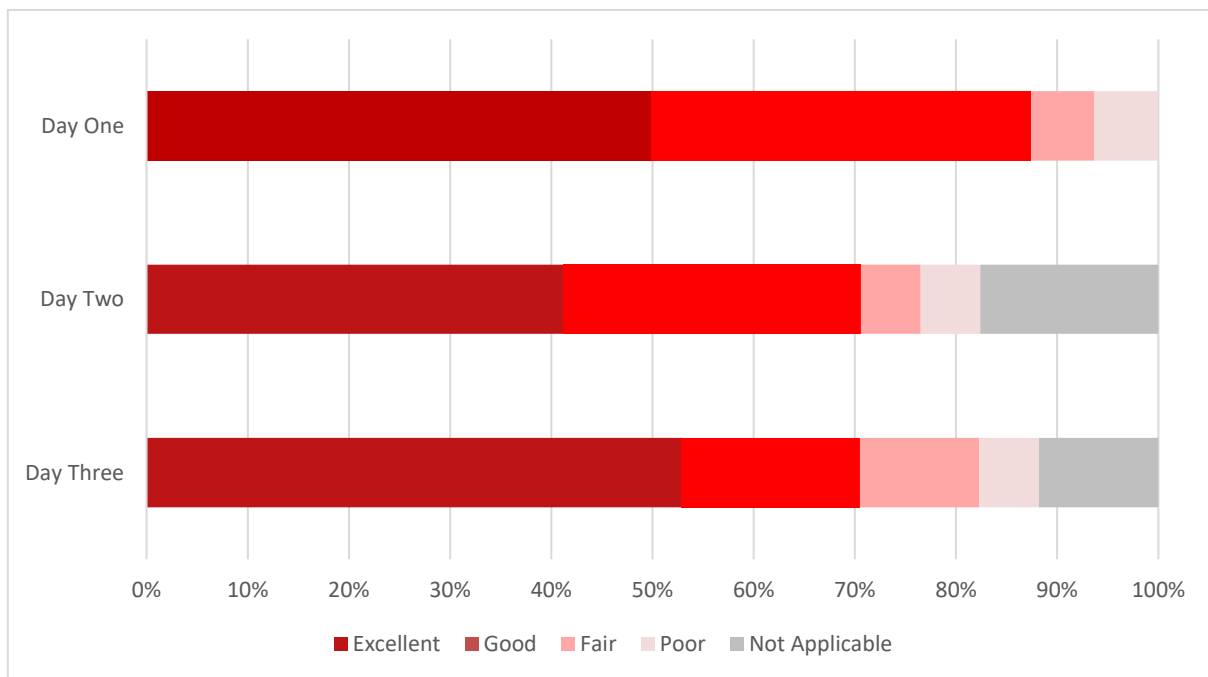
- The format of the main programme sessions was rated Excellent (29%), High (65%) or Fair (6%).
- The format of the poster sessions was rated Excellent (6%), Good (41%), or Fair (23%). The remaining 29% of attendees indicated that this question was not applicable.
- The number of poster sessions was rated Excellent (6%), Good (50%) or Fair (12%). The remaining 31% of attendees indicated that this question was not applicable.

Overall, the organisation of the conference was well rated.



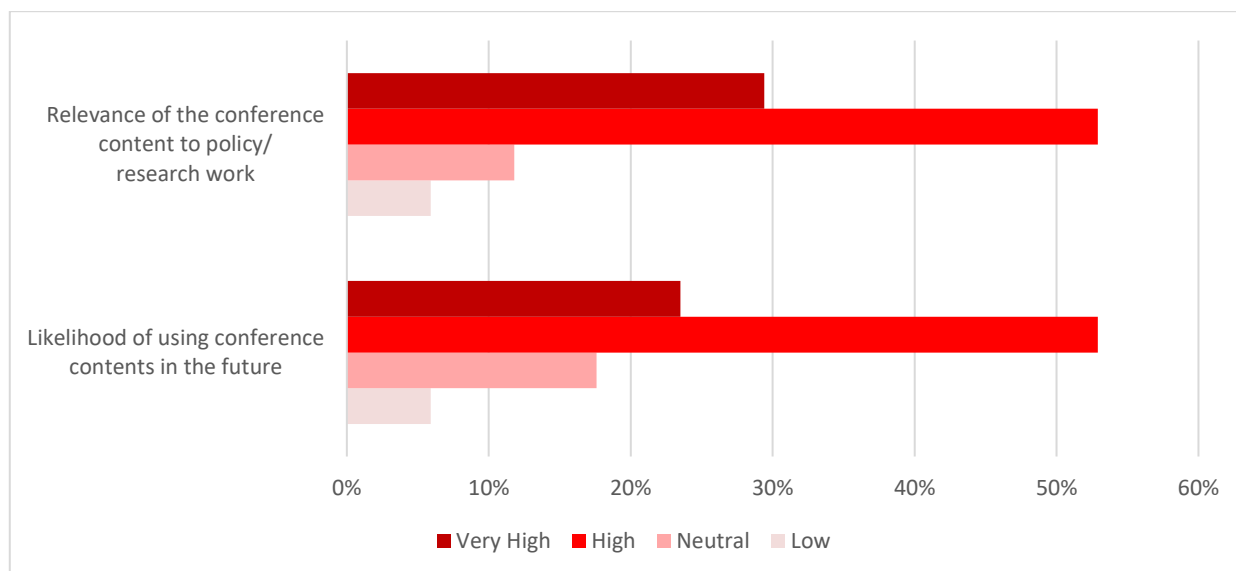
ATTENDEE EXPERIENCE

While the conference feedback form does not include a specific rating for overall experience at the event, other feedback results indicate that the attendees had a positive experience. Notably, the attendees highly rated the quality of the sessions on each day of the conference.



When attendees were asked to rank how useful certain aspects of the conference were, the most common ranking was the quality and innovation of the scientific programme first, then knowledge exchange with peers and presenters, and lastly networking.

Further demonstrating the usefulness of the conference, the majority of attendees highly rated the relevance of the conference for their work and the likelihood of using the conference contents in the future. Only one attendee commented that the content was not useful for their research.



In another positive indicator of their experience, attendees rated the likelihood of joining another EABCN conference as either Very High (59%) or High (41%) and the possibility of joining other EABCN events as Very High (41%), High (53%), or Neutral (6%).

ATTENDEE RECOMMENDATIONS

In their feedback, attendees suggested the following topics as aspects of a future conference:

- Challenges and new areas to work upon
- Fintech
- HANK and inflation targeting for emerging economies
- Monetary transmission mechanism using BVAR, etc.
- Interaction between monetary and fiscal policy in a monetary union
- Regions outside the Eurozone and US

Euro Area Business Cycle Network Training School

Fiscal Policy: Estimating Causal Evidence and Positive Theory

by

Morten Ravn (UCL and CEPR)

**University of Mannheim
Germany**

Due the global COVID-19 outbreak this course will be held online

04-05 May 2020

Deadline: 6pm (UK time), Friday 3 January 2020

General Description

We are pleased to announce details of the latest EABCN Training School; a two-day course entitled “Fiscal Policy: Estimating Causal Evidence and Positive Theory”. Professor Morten Ravn will teach the course. It is primarily aimed at participants in the Euro Area Business Cycle Network but applications will also be considered from doctoral students, post-doctoral researchers and economists working in central banks and government institutions outside of the network, as well as commercial organisations (fees are applicable for non-network non-academic organisations).

Course Contents

Since the Global Financial Crisis, there has been a resurgence of interest in fiscal policy amongst both academics and policy makers. A question of central interest is the causal impact of fiscal policy shocks and, in particular, the *dynamic* causal effects. As with monetary policy, the main obstacle to producing such evidence is that changes in fiscal policy instruments are to a large extent endogenous. This course look into methods available for confronting such endogeneity and discuss applications. We will also examine how to confront issues such as anticipation effects, heterogeneity (across the population), and state dependence (time permitting). The course will also connect the results to economic theory and look into positive theories of fiscal policy.

Administrative Information:

The course will be hosted by University of Mannheim, Germany. **Note that due the global COVID-19 outbreak this course will be held online.**

Candidates who have a CEPR profile should apply by submitting their CV online at <https://portal.cepr.org/EABCN-TS-April-2020> by 6pm (UK Time +1 GMT), **Friday January 3, 2020**. If you do not currently have a CEPR profile, please create a new one [here](#) and then click on the registration link.

We ask that you send a current version of your CV. PhD students should also specify in which way the school will be useful for their current research (max 300 words).

About the Instructor:

Morten O. Ravn is Professor of Economics at University College London. He holds a PhD from the University of Southampton and has previously been employed at University of Aarhus, University of Southampton, Universitat Pompeu Fabra, London Business School and the European University Institute. His research has been concerned with macroeconometrics, macroeconomic theory and international macro with main themes being fiscal policy, business cycles, and monetary economics. He has published in the Quarterly Journal of Economics, American Economic Review, Review of Economic Studies, Journal of Monetary Economics, American Economic Journal and many others. He is also Deputy Chairman of the Board of the Danish National Research Foundation, CEPR Research Fellow and has served as Managing Editor of the Economic Journal.

Euro Area Business Cycle Network Online Training School

**Continuous-time Methods in Macroeconomics
(with applications to heterogeneous agent models)**

by

**Jesús Fernández-Villaverde (University of Pennsylvania)
and
Galo Nuño (Bank of Spain)**

30 September-2 October 2020

Deadline: 6pm (UK time), Friday 18 September 2020

General Description

We are pleased to announce that more spaces have become available for this EABCN Training School as it will be held online.

This will be a three-day course on “Continuous-time Methods in Macroeconomics (with applications to heterogeneous agent models)”, taught by Professor Jesús Fernández-Villaverde and Galo Nuño.

It is primarily aimed at participants in the Euro Area Business Cycle Network, but applications will also be considered from doctoral students, post-doctoral researchers, and economists working in central banks and government institutions outside of the network, as well as commercial organisations (fees are applicable for non-network non-academic organisations).

Course outline

A recent literature has shown that heterogeneous agent (HA) models can be crucial for the understanding of the transmission mechanism of monetary and fiscal policies. So far, a significant barrier to the widespread use of HA models in academic and policy circles, including central banks, has been the complexity in the solution and estimation of this class of models. New analytical and numerical tools, however, have emerged in the last years that greatly simplify this task. Continuous-time methods, in particular, provide important advantages for the analysis of HA models.

This training course introduces the main tools, as well as some recent advances, in continuous-time methods in macroeconomics, with a focus on their application to HA models. This course will provide participants with the necessary background to apply these tools in practice as well as introduce some relevant applications in macro and monetary economics.

Administrative Information:

The course will take place online. Candidates who have a CEPR profile should apply by submitting their CV online at <https://portal.cepr.org/EABCN-TS-Oct-2020> by 6pm (UK Time +1 GMT), **Friday 18 September 2020**. If you do not currently have a CEPR profile, please create a new one [here](#) and then click on the registration link.

We ask that you send a current version of your CV. PhD students should also specify in which way the school will be useful for their current research (max 300 words).

Participants from non-academic institutions where the employer is not a member of the EABCN network are charged a reduced course fee of € 1000.

About the Instructors:

Jesús Fernández-Villaverde is currently Professor of Economics at the University of Pennsylvania, where he serves as Director of Graduate Studies in the Economics Department, Visiting Professor at University of Oxford, Visiting Scholar at the Federal Reserve Banks of Chicago, Cleveland, and Philadelphia and the Bank of Spain, Advisor to the Hoover Institution at Stanford University's Regulation and Rule of Law Initiative, and a member of the National Bureau of Economic Research and the Center for Economic Policy Research. In the past, he has held academic appointments, among others, at Harvard University, Princeton University, Yale University, Duke University, and New York University, he has been Visiting Scholar at the Federal Reserve Banks of St. Louis, Minneapolis, Cleveland, and Atlanta, Research Professor at FEDEA (Spain), National Fellow of the Hoover Institution at Stanford University, Visiting Scholar at the Becker-Friedman Institute of the University of Chicago, Visiting Scholar at INET at University of Cambridge, Distinguished Visiting Professor at University of Melbourne (Australia), and he was the director of the Penn Institute for Economic Research. He is editor of the *International Economic Review*. In the past, he has served in the editorial board of several other learned journals. He has published many peer-reviewed papers, including *American Economic Review*, *Econometrica*, and *Review of Economic Studies* and edited and co-authored several books. His research focuses on macroeconomics, econometrics, and economic history. Among other topics, he is interested in the role of monetary and fiscal policy, the sources of economic growth, the importance of the rule of law, and the foundations of market economies.

Galo Nuño is Head of the Monetary Policy and Macroeconomic Analysis Section at the Bank of Spain. His research focuses on monetary economics, macrofinance and computational methods. In particular, he has developed, with different coauthors, some new theoretical and numerical techniques for the study of continuous-time heterogeneous-agent models, including the analysis of optimal policies and the solution and estimation of nonlinear models with aggregate shocks. He has published in the *American Economic Journal: Macroeconomics*, *Journal of Monetary Economics*, *Journal of Economic Growth*, *Review of Economic Dynamics*, *Economic Journal* and many others.

EURO AREA BUSINESS CYCLE NETWORK (EABCN)

Conference on
"Empirical Advances in Monetary Policy"

Paris, October 26-27, 2020
Hosted by Banque de France, Paris

A Euro Area Business Cycle Network (EABCN) Conference
www.eabcn.org

Organisers

Eleonora Granziera (Norges Bank)

Sarah Mouabbi (Banque de France)

Barbara Rossi (ICREA-Pompeu Fabra University, Barcelona GSE, CREI and CEPR)

The conference will cover a broad range of themes related to empirical aspects of monetary policy. Topics of the conference include but are not limited to:

- Measuring the effects of monetary policy on the macroeconomy
- Identifying the transmission channels of monetary policy
- International monetary policy channels
- Communication strategies, the role of expectations and forward guidance
- Risks associated to uncertainty and to the normalization of monetary policy
- Monetary policy and financial markets
- Effects of monetary policy on firm expectations and decisions

Simon Gilchrist (New York University), **Ricardo Reis** (London School of Economics and CEPR) and **Stephanie Schmitt-Grohe** (Columbia University) are confirmed invited speakers, and we welcome further relevant submissions.

The deadline for submissions is 9am GMT on Friday January 31 2020. For CEPR members and those registered with the CEPR website, please submit your paper [via the CEPR online system by visiting here](#). If you do not have a personal profile to use this area of the CEPR website as yet, you can [create one here](#).

If you have any difficulty in registering, please contact Mariolina Ciccone, Events officer at mciccone@cepr.org with the subject line "40046 - EABCN-Banque de France Conference 2020".

Please indicate in your email if you will be able to cover your own travel and accommodation costs, or whether you will require funding from EABCN. Authors of successful submissions and accepted participants will be notified by mid March 2020.

The event is hosted by Banque de France, and sponsored by the EABCN. Limited funding is available for travel expenses for academic participants that are presenting. Expenses will be reimbursed according to the standard [CEPR travel guidelines](#).

Costs will not be covered for central bank participants.