

# 2021 ANNUAL REPORT

1 October 2020 - 30 September 2021

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

# For the **Annual Steering Committee Meeting** 2021

# 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
2. Recent Events	5
Training Schools	5
3. Future Events	7
Conferences	8
Training Schools	8
Other Events	9
4. Financial Report 2020-2021	Error! Bookmark not defined.
5. Euro Area Business Cycle Dating Committee (EABCDC)	9
Current Committee members	10
Report on Activities	10
6. EABCN Website	10
7. Feedback on Events	12
The ZLB and Secular Stagnation	12
Recent Developments in Forecasting	15
Modern Macro, Money, and International Finance	17
Beliefs and Social Networks	20
Business Cycle Measurement and Facts	23
Formulating and Estimating DSGE Models	25
8. Event Programmes	28

# 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 the University of Mannheim, a Research Professor at the Deutsche Bundesbank, a CEPR Research Fellow and an Associate Editor of the Journal of Monetary Economics. Before returning to Mannheim, he taught at Nuffield College, University of Oxford. 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. 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** Rafael Wouters

Central Bank & FSA of Ireland

Fiona Farrelly

Czech National Bank

Jan Brůha

Danmarks Nationalbank

Federico Ravenna

De Nederlandsche Bank

Peter van Els

**Deutsche Bundesbank** Christian Schumacher

**DG ECFIN**Björn Doehring

**European Central Bank** Luc Laeven

Magyar Nemzeti Bank Lorant Kaszab

**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** 

Rowan Walter

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**, Head of Projects (<a href="mtsvetkova@cepr.org">mtsvetkova@cepr.org</a>) unless stated otherwise (for example, concerning a specific conference or training school).

# 2. RECENT EVENTS

This report covers activities that took place in the period 1 October 2020 – 30 September 2021.

The impact of Covid-19 was still felt in 2021, which led to a profound transformation in the way businesses work and scientific events are organised. The spread of the virus also affected EABCN in 2021 by continuing to make travel and face-to-face meetings increasingly difficult. As a result, the Network successfully organised six training schools online. No conferences were held.

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. The feedback will be considered when organising future events. 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.

# TRAINING SCHOOLS

#### THE ZLB AND SECULAR STAGNATION

#### ONLINE, 24-28 MAY 2021

This training school was taught by **Gauti Eggertson** (Brown University).

The school covered the basic theory of price and output determination in the New Keynesian models and the effect of monetary and fiscal policy. It focused on how the basic framework can explain not only the effect of monetary and fiscal policy under normal circumstances but also conditions that give rise to hyperinflation and especially conditions giving rise to zero interest rate. The training school also covered

theories of prolonged slumps, often termed theories of secular stagnation, and discussed the importance of heterogeneous agent models to understand the transmission of monetary and fiscal policy. The main reference was a new manuscript on monetary economics written by Gauti Eggertsson.

The course attracted 90 applications, of which 89 participants were selected.

# RECENT DEVELOPMENTS IN FORECASTING

#### BANK OF ITALY

# ONLINE, 01-08 JUNE 2021

This training school was taught by **Graham Elliott** (UC San Diego) and **Allan Timmermann** (UC San Diego & CEPR), and co-organised by the Bank of Italy.

The course introduced participants to a variety of advanced topics and recent developments in economic forecasting. The first part of the course examined the forecasting problem in general, showing that point forecasting is parameter estimation with a conditional model of the outcome and density forecasting is estimation of a conditional density. The second part of the course covers how to choose among competing forecasts and formally compare forecasting performance across two or possibly large numbers of forecasts.

The training school had 173 applications for participation, of which 113 were accepted.

# MODERN MACRO, MONEY, AND INTERNATIONAL FINANCE

# ONLINE, 07-23 JUNE 2021

This training school was taught by **Markus Brunnermeier** (Princeton University), while **Sebastian Merkel** (Princeton University) gave the TA sessions.

This course exposed participants to modern continuous time modelling techniques at the intersection between macroeconomics, monetary economics and (international) finance. The aim of this course was to develop and teach advanced tools and includes a step-by-step solution procedure that participants can apply to a variety of economic problems. Topics included monetary theory based on financial frictions, non-linear dynamics, endogenous risk and risk premium dynamics, safe assets, fiscal debt capacity, currency competition in an international setting, and as well as digital currency issues.

The course attracted over 190 applications, of which 188 participants were selected.

# BELIEFS AND SOCIAL NETWORKS

#### UNIVERSITY OF MANNHEIM

# ONLINE, 14-25 JUNE 2021

This training school was taught by **Johannes Ströbel** (NYU Stern School of Business & CEPR).

This course introduced participants to recent literature that studies the interaction between household and investor beliefs, social interactions, financial markets, and the broader macroeconomy. The first lecture explored the role of investor beliefs in affecting financial markets, reviewing a number of recent research papers that combine survey evidence of investor beliefs with (largely behavioural) models of asset pricing. The second lecture then discussed the determinants of investor beliefs. The third lecture explored how social interactions affect investor beliefs and behaviours in the housing market. Finally, the fourth and last lecture explored how social networks and social interactions affect a range of other economic outcomes, such as mutual fund investments and international trade patterns.

The course attracted 46 applications, with all 46 being selected.

# BUSINESS CYCLE MEASUREMENT AND FACTS

# ONLINE, 13-17 SEPTEMBER 2021

This training school was taught by **James Morley** (University of Sydney).

This course introduced participants to some useful methods for trend-cycle decomposition of macroeconomic variables, along with major empirical findings regarding the behaviour of output gaps, trend inflation, the natural rate of interest, and household consumption. Nonlinear models and asymmetries were also considered in order to examine implications for the nature of business cycles and the effectiveness of stabilisation policies.

The course attracted 57 applications, of which 55 participants were selected.

# FORMULATING AND ESTIMATING DSGEMODELS

# ONLINE, 27 SEPTEMBER - 01 OCTOBER 2021

This training school was taught by **Martin Eichenbaum** (Northwestern University) and **Mathias Trabandt** (Goethe University Frankfurt).

This course was geared towards researchers and practitioners who were interested to learn how to formulate and estimate dynamic stochastic general equilibrium (DSGE) models. The following topics were covered: a review of the New Keynesian model as the course workhorse DSGE model; structural model estimation using full information (Bayesian) estimation techniques; structural model estimation using limited information (Bayesian) estimation techniques; and hands-on MATLAB and DYNARE sessions.

The course attracted 102 applications, of which 99 participants were selected.

# 3. FUTURE EVENTS

The Network is planning four conferences and four new training schools, which brings the number of events in 2022 to eight.

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

# CONFERENCES

# INTERNATIONAL RESEARCH FORUM ON MONETARY POLICY

#### EUROPEAN CENTRAL BANK AND FEDERAL RESERVE BOARD

#### 4-5 APRIL 2022

More details on this event will be available soon.

# CHALLENGES IN EMPIRICAL MACROECONOMICS SINCE 2020

# **BUNDESBANK/ ONLINE**

#### 19-20 MAY 2022

**Frank Schorfheide** (University of Pennsylvania & CEPR) and **Serena Ng** (Columbia University) are among the invited speakers.

More details on this event will be available soon.

# THE MACRO AND MICRO OF DIGITAL COINS AND MARKETS

#### **HYBRID**

#### 10-11 JUNE 2022

More details on this event will be available soon.

#### MONETARY POLICY IN THE POST-PANDEMIC ERA

#### UNIVERSITY OF MANNHEIM

# AUGUST/SEPTEMBER 2022

More details on this event will be available soon.

# TRAINING SCHOOLS

# HETEROGENEOUS-AGENT MACRO IN THE SEQUENCE SPACE

# FRANKFURT OR MANNHEIM

# 15-17 JUNE 2022

The school will be led by **Ludwig Straub** (Harvard University).

More details will follow in due course.

#### MACROECONOMICS OF INFORMATION FRICTIONS

CENTRAL BANK OF IRELAND

25 JULY 2022

The school will be led by **Yuriy Gorodnichenko** (University of California Berkeley & CEPR). More details will follow soon.

# WHAT IS NEW IN THE MIXED FREQUENCY DATA (MIDAS), WITH APPLICTIONS TO MACHINE LEARNING AND BIG DATA

#### SEPTEMBER 2022

The school will be led by Eric Ghysels (UNC-Chapel Hill & CEPR) and Massimiliano Marcellino (Bocconi University & CEPR). More details will follow soon.

#### TBC

TBC, 2022

More details will follow in due course.

#### OTHER EVENTS

# ANNUAL EABON STEERING COMMITTEE MEETING

EUROPEAN CENTRAL BANK,

# ONLINE, 2 DECEMBER 2021

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.

# 5. 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.

EACBDC, 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**

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

#### REPORT ON ACTIVITIES

<u>29 September 2020:</u> The Dating Committee deliberated electronically on 15 September 2020 to assess the state of euro area economic activity in the aftermath of the Covid-19 pandemic. In their fall statement, the Committee concluded that the latest euro area expansion reached its peak in 2019Q4. The pace of that now-ended 31-quarter expansion, which had begun in 2013Q2, was the slowest of all euro area recoveries to date.

The euro area entered recession during 2020Q1, most likely in March, with economic activity and employment decreasing in 2020Q1 and 2020Q2 across euro area countries at unprecedented speeds and to unprecedented depths.

The magnitude of the shock suffered by the euro area and the marked changes that accompany this 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.

<u>29 March 2021:</u> The Dating Committee deliberated electronically on 18 March 2021 to assess the state of economic activity in the euro area. In their spring statement, the Committee concluded that available data do not allow it to conclude whether the euro area recession that started after the 2019Q4 peak has ended. The sharp rebound in economic activity that occurred during 2020Q3 could have marked the end of the euro area recession, but it may just have been a reprieve.

Current data show a precipitous drop in activity in 2020Q2, a sharp rebound in 2020Q3, but then a mild decline in 2020Q4. The Committee's view is that this pattern reflects the ebb and flow of the Covid-19 pandemic and associated lockdowns, rather than intrinsic expansionary dynamics. The former might, of course, be masking the latter. But making a conclusive cyclical determination requires evidence of a sustained expansion.

On 9 November 2021, the EABCDC issued their fall statement. More information will be available in next year's report.

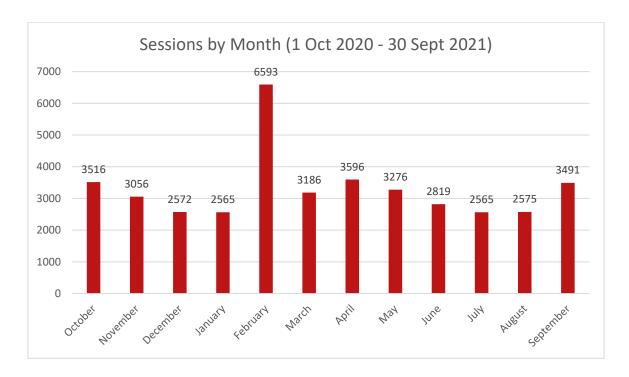
# 6. EABCN WEBSITE

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 2020 – 30 September 2021.

Total Sessions*	39,810
Average visit length	51 seconds
Average pages per visit	1.65

<sup>\*</sup>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 decreased compared to 2019-2020, there has been a 13.5% increase 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 (25,779). The direct visits (a user typing the EABCN domain address) were 10,802. 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

# 7. FEEDBACK ON EVENTS

# THE ZLB AND SECULAR STAGNATION

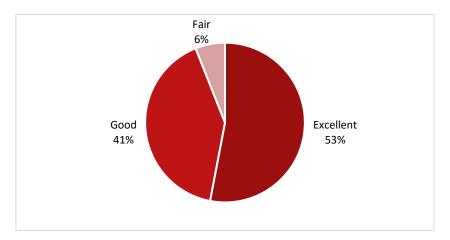
# ONLINE, 24-28 MAY 2021

#### ORGANISATION OF TRAINING SCHOOL

The training school took place was organised online.

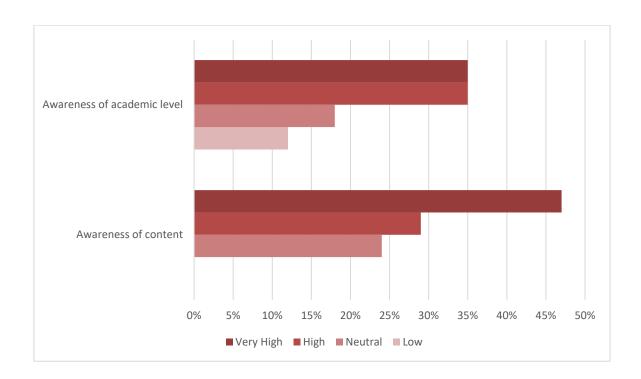
- Participants still rated the pre-meeting organisation highly, with a majority selecting Excellent (65%) and the remainder choosing Good (29%) or Fair (6%).
- The majority of participants rated the ease of using the online platform Zoom as Excellent (88%), with the remaining selecting Good (6%) or Fair (6%).
- The majority of participants also rated the organisation during the classes by Gauti Eggertsson and Cosimo Petracchi highly, with a majority selecting Excellent (59%) and the remainder choosing Good (35%) or Fair (6%).
- Participants rated the quality of the sound and video as either Excellent (82%) or Good (18%).

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



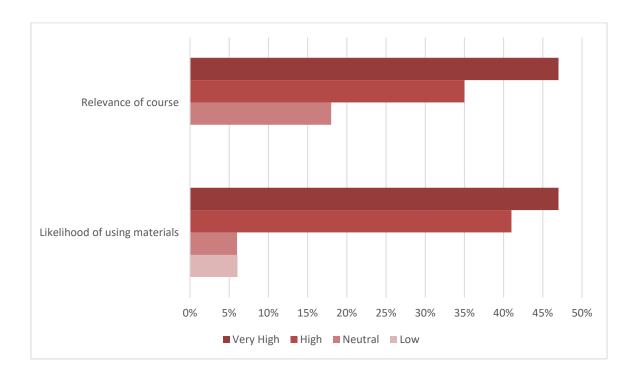
# PARTICIPANT EXPECTATIONS

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, 100% of the participants rated the course materials as the most beneficial aspect. Knowledge exchange with peers and lecturers was most commonly ranked second (94% of responses), and networking was most commonly ranked third (94% of responses).

The participants' experience of the teaching on the training school was very positive, with 94% of participants rating the lecturers' expertise as Very High and the remaining 6% 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 (76%), High (18%), or Neutral (6%).
- Other EABCN events as Very High (65%), High (29%), or Neutral (6%).

#### PARTICIPANT RECOMMENDATIONS

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

- To allocate time to hands-on exercises or tutorials such as Dynare, 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:

- Macroeconomics of climate change
- Sovereign debt and default
- HANK models
- Mixed frequency BVAR
- Firm dynamics
- Dynare
- Bayesian econometrics
- Inequality
- Circular economy

# RECENT DEVELOPMENTS IN FORECASTING

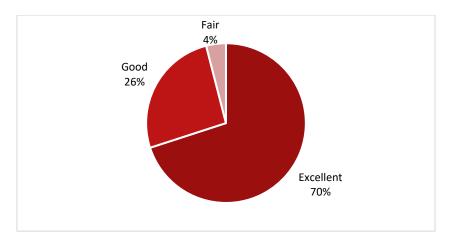
# **ONLINE, 1-8 JUNE 2021**

#### ORGANISATION OF TRAINING SCHOOL

The training school took place online.

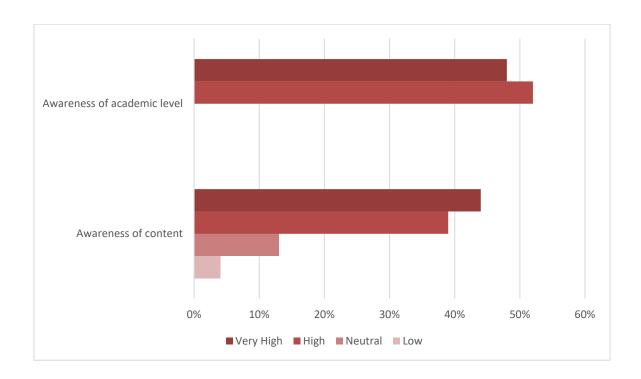
- Participants still rated the pre-meeting organisation highly, with a majority selecting Good (52%) and Excellent (44%) and the remainder choosing Fair (4%).
- The majority of participants rated the ease of using the online platform Zoom as Excellent (83%), with the remaining selecting Good (17%).
- The majority of participants also rated the organisation during the classes by Graham Elliott and Allan Timmermann highly, with a majority selecting Excellent (78%) and the remainder choosing Good (18%) or Poor (4%).
- Participants rated the quality of the sound and video as either Excellent (70%), Good (26%) or Fair (4%).

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



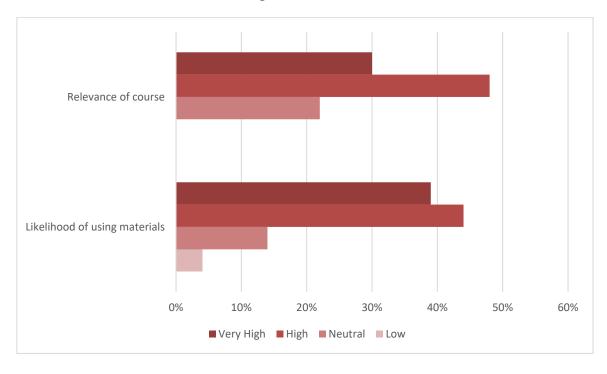
#### PARTICIPANT EXPECTATIONS

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, 91% of the participants rated the course materials as the most beneficial aspect. Knowledge exchange with peers and lecturers was most commonly ranked second (65% 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 91% of participants rating the lecturers' expertise as Very High and the remaining 9% 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 (57%), High (39%), or Neutral (4%).
- Other EABCN events as Very High (48%), High (39%), or Neutral (13%).

#### PARTICIPANT RECOMMENDATIONS

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

- To allocate more time to practical exercises that could give participants practical implementation experience, and to use free and widely used coding software such as Python or R.
- More time for networking and an opportunity for everyone to introduce themselves and talk about their research.

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

- Macro-econometrics
- Big data
- Machine learning
- Forecast evaluation
- Methods for analysing macroeconomic risk
- Tests of asset pricing models

# MODERN MACRO, MONEY, AND INTERNATIONAL FINANCE

ONLINE, 7-23 JUNE 2021

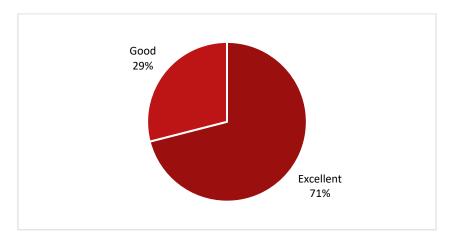
#### ORGANISATION OF TRAINING SCHOOL

This training school also took place online.

• Participants still rated the pre-meeting organisation highly, with a majority selecting Excellent (64%) and the remainder choosing Good (29%) or Fair (7%).

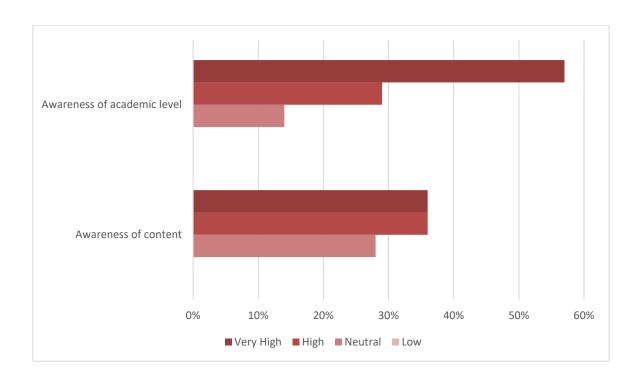
- The majority of participants rated the ease of using the online platform Zoom as Excellent (79%), with the remaining selecting Good (14%) or Fair (7%).
- The majority of participants also rated the organisation during the classes by Markus Brunnermeier highly, with a majority selecting Excellent (71%) and the remainder choosing Good (21%) or Fair (7%).
- Participants rated the quality of the sound and video as either Excellent (43%), Good (43%) or Fair (14%).

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



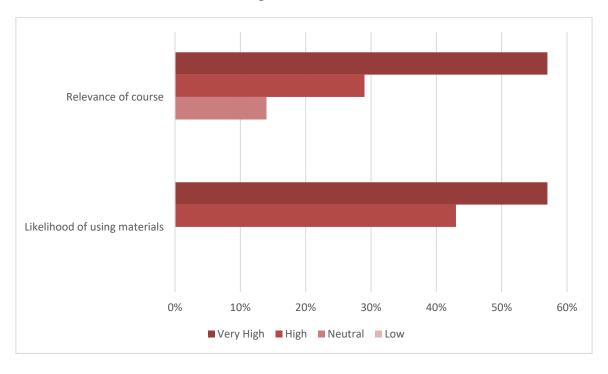
#### PARTICIPANT EXPECTATIONS

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, 69% of the participants rated the course materials as the most beneficial aspect. Knowledge exchange with peers and lecturers was most commonly ranked second (69% of responses), and networking was most commonly ranked third (54% of responses).

The participants' experience of the teaching on the training school was very positive, with 93% of participants rating the lecturers' expertise as Very High and the remaining 7% 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 (57%), High (29%), or Neutral (14%).
- Other EABCN events as Very High (57%), High (29%), or Neutral (14%).

#### PARTICIPANT RECOMMENDATIONS

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

- Publish slides before the class and conclude the class with a diploma of attendance or certificate.
- To strengthen the networking opportunity by allowing participants to introduce themselves and their research.

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

- Behavioural macroeconomics
- International finance data management
- Inflation
- Quantitative methods of macroeconomics
- Business and financial cycles
- Labour market topics

# BELIEFS AND SOCIAL NETWORKS

ONLINE, 14-25 JUNE 2021

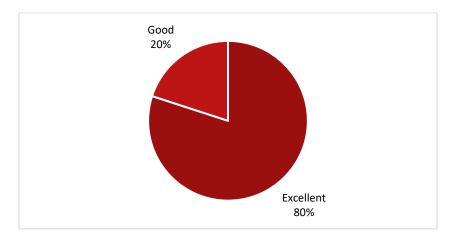
#### ORGANISATION OF TRAINING SCHOOL

This event was also organised online

- Participants still rated the pre-meeting organisation highly, with a majority selecting Excellent (80%) and the remainder choosing Fair (20%).
- The majority of participants rated the ease of using the online platform Zoom as Excellent (80%), with the remaining selecting Good (20%).

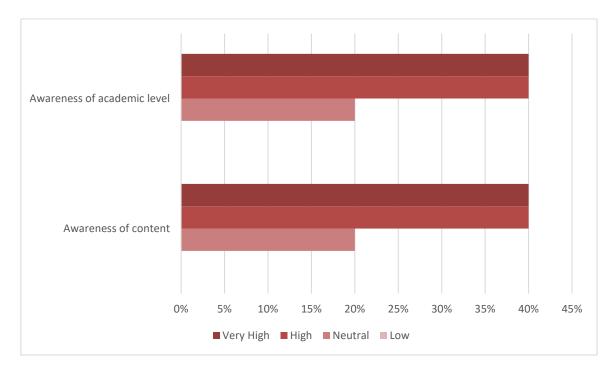
- The majority of participants also rated the organisation during the classes by Johannes Stroebel highly, with a majority selecting Excellent (60%) and the remainder choosing Good (40%).
- Participants rated the quality of the sound and video as either Excellent (80%) or Good (20%).

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



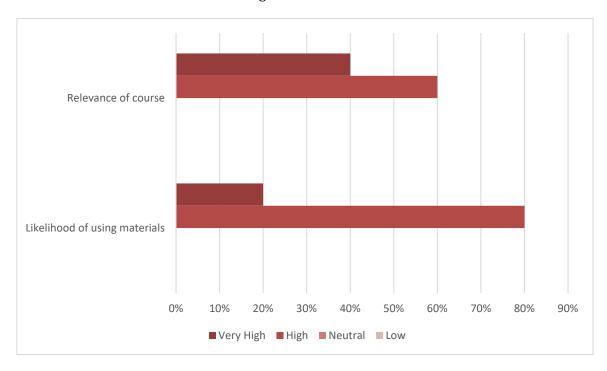
#### PARTICIPANT EXPECTATIONS

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, 60% of the participants rated networking as the most beneficial aspect. Course materials were most commonly ranked second (60% of responses), and knowledge exchange with peers and lecturers was most commonly ranked third (40% of responses).

The participants' experience of the teaching on the training school was very positive, with 100% of participants rating the lecturers' expertise as Very 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 (40%), High (20%), or Neutral (40%).
- Other EABCN events as Very High (20%), High (20%), or Neutral (60%).

# PARTICIPANT RECOMMENDATIONS

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

- There was a preference to host trainings physically rather than virtually.
- To have practical classes that make use of macroprudential tools.

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

• Macroeconomic models considering behavioural features from a theory perspective.

# BUSINESS CYCLE MEASUREMENT AND FACTS

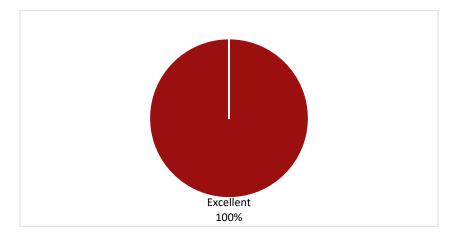
# ONLINE, 13-17 SEPTEMBER 2021

#### ORGANISATION OF TRAINING SCHOOL

This training school also took place online.

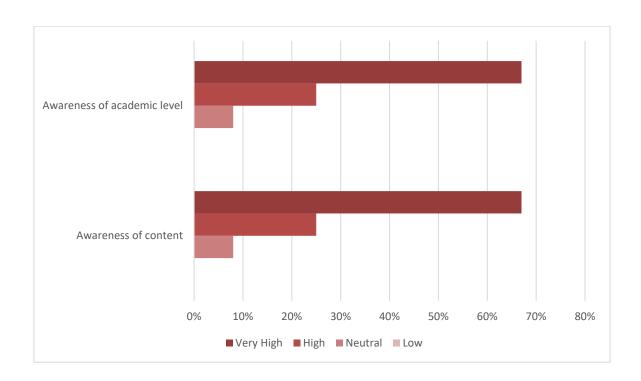
- Participants still rated the pre-meeting organisation highly, with a majority selecting Excellent (67%) and the remainder choosing Good (33%).
- All participants rated the ease of using the online platform Zoom as Excellent (100%).
- Nearly all participants also rated the organisation during the classes by James Morley as Excellent (92%) and the remainder choosing Good (8%).
- Participants rated the quality of the sound and video as Excellent (100%).

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



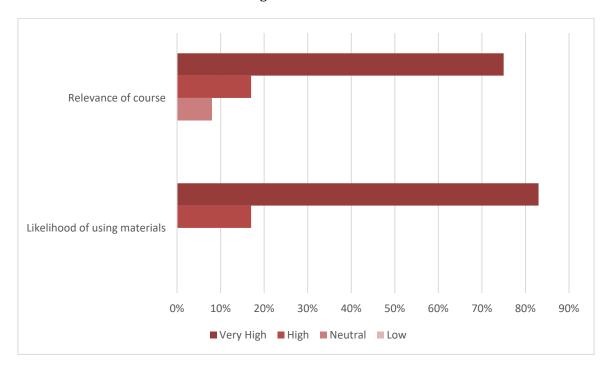
#### PARTICIPANT EXPECTATIONS

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, 100% of the participants rated the course materials as the most beneficial aspect. Knowledge exchange with peers and lecturers was most commonly ranked second (67% of responses), and networking was most commonly ranked third (67% of responses).

The participants' experience of the teaching on the training school was very positive, with 100% of participants rating the lecturers' expertise as Very 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 (92%), or High (8%).
- Other EABCN events as Very High (58%), High (33%), or Neutral (9%).

#### PARTICIPANT RECOMMENDATIONS

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

• To offer a diploma of completion or a certificate of sorts.

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

- Panel data analysis at the macro-level
- Emerging markets business cycles
- Government bond spreads in the Euro area
- Mid- and long-term business & economic cycles

# FORMULATING AND ESTIMATING DSGE MODELS

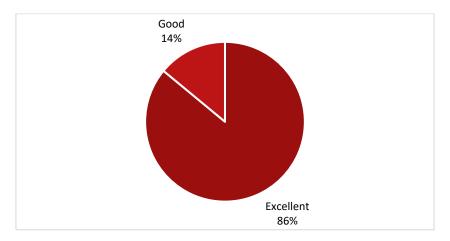
ONLINE, 27 SEPTEMBER - 1 OCTOBER 2021

#### ORGANISATION OF TRAINING SCHOOL

This event also took place online.

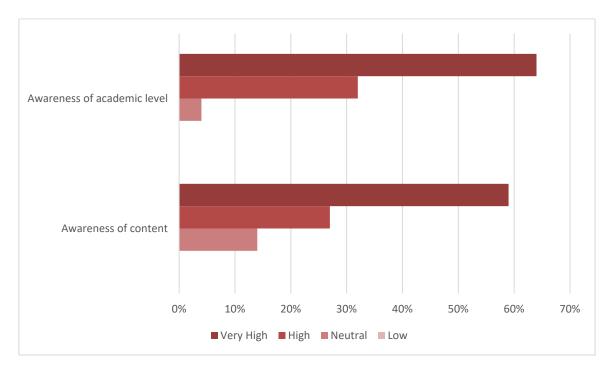
- Participants still rated the pre-meeting organisation highly, with a majority selecting Excellent (59%) and the remainder choosing Good (36%) or Fair (5%).
- The majority of participants rated the ease of using the online platform Zoom as Excellent (64%), with the remaining selecting Good (32%) or Fair (4%).
- The majority of participants also rated the organisation during the classes by Martin Eichenbaum and Mathias Trabandt highly, with a majority selecting Excellent (86%) and the remainder choosing Good (14%).
- Participants rated the quality of the sound and video as either Excellent (82%) or Good (18%).

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



#### PARTICIPANT EXPECTATIONS

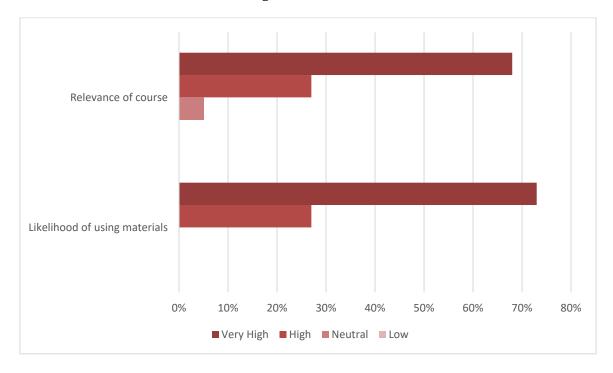
Participant feedback on the information provided online about the training school, including its academic level and content, suggests that most participants' expectations of the training school were fulfilled. All participants indicated that there was sufficient information on the website. The feedback 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, 82% of the participants rated the course materials as the most beneficial aspect. Knowledge exchange with peers and lecturers was most commonly ranked second (68% of responses), and networking was most commonly ranked third (77% of responses).

The participants' experience of the teaching on the training school was very positive, with 100% of participants rating the lecturers' expertise as Very 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 (77%), or High (23%).
- Other EABCN events as Very High (73%), High (23%), or Neutral (4%).

# PARTICIPANT RECOMMENDATIONS

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

- To allocate time to exercises or tutorials that could give participants practical implementation experience.
- To allow recordings to be available for a longer time. The current procedure was too short.

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

- Behavioural macroeconomics and finance
- Solving and estimating heterogeneous agents' models
- DSGE models
- Non-linear times series
- Monetarist views
- Bayesian structural VAR model estimation and machine learning applications in economics
- Sovereign default models

# 8. EVENT PROGRAMMES





# Euro Area Business Cycle Network Training School

# **Recent Developments in Forecasting**

By

**Graham Elliott (UC San Diego)** 

Allan Timmermann (UC San Diego)

Hosted online with Banca d'Italia, Italy

1-8 June 2021

Deadline: 6pm (UK time), Wednesday 7 May 2021

# **General Description**

We are pleased to announce details of the latest EABCN Training School; a three-day course entitled "Recent Developments in Forecasting". Professors Graham Elliott and Allan Timmermann 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 applicable for non-network organisations).

#### **Course Contents**

The course introduces participants to a variety of advanced topics and recent developments in economic forecasting. The first part of the course examines the forecasting problem in general, showing that point forecasting is parameter estimation with a conditional model of the outcome and density forecasting is estimation of a conditional density. We clarify what we mean by optimal forecasting and relate classical and Bayesian approaches.

Understanding these issues provides a foundation for all forecasting problems. Binary forecasting or classification is most closely related to decision making. The simplicity of the loss function allows many strong results. Parametric, Semiparametric and nonparametric methods will be discussed and properties of the approaches examined.

Often the difference between good and bad forecasting approaches hinges on how they deal with changes to the underlying data generating process. The course therefore next addresses the consequences of model instability on forecasting performance and discusses strategies for dealing with such instability, using empirical illustrations from macroeconomics and finance. We also discuss how one can use multivariate (panel) information to better deal with model instability in a forecasting context.

A major issue in modern forecasting is the large number of potential predictors. Much work has been undertaken in econometrics, statistics and computer science in recent years. We provide a framework for thinking about methods as well as explain how some of the popular machine learning methods work and their properties. With this in place, we cover a variety of variable selection and model aggregation methods.

The final part of the course covers how to choose among competing forecasts and formally compare forecasting performance across two or possibly large numbers of forecasts. Ignoring the search across multiple models for a good forecasting model can introduce data mining biases, and we discuss ways to handle this problem.

The course draws on material from the following book (referred to as ET):
G. Elliott and A. Timmermann, 2016, **Economic Forecasting**. Princeton University Press.

# Part I: Foundations and the Binary Forecasting Problem

#### I. The Forecasting Problem

- 1. Economic loss functions and 'optimal' forecasting (ET chapter 2-3)
- 2. Classical and Bayesian Forecasts (ET chapter 4-5)

# II. The Binary Forecasting Problem (ET chapter 12)

- 1. Loss functions
- 2. Point and Density Forecasting
- 3. Methods for Classification/Binary Forecasting

# Part II: Predictive Modelling Methods and Model Instability

# III. Forecasting under model instability

- Detection of breaks in time-series forecasting models (Rossi, 2013, Elliott and Mueller, 2006)
- 2. Choice of estimation window in the presence of instability (Pesaran and Timmermann, 2007)
- 3. Ad-hoc Strategies vs. Parametric Models of the Change Process (ET chapter 19, Pettenuzzo and Timmermann, 2011, 2017)
- 4. Exploring Panel Data for Detecting and Forecasting under Breaks (Smith and Timmermann, 2017)

#### IV. Forecasting with Many Regressors

- 1. Sparse vs. Dense Models: PCA, PLS, LASSO and variants
- 2. Machine Learning Methods: Trees and neural nets (Gu, Kelly, and Xia, 2020, Coulombe et al, 2020)

#### V. Model Selection and Forecast Combination Methods

- 1. Model Selection Methods (ET, chapter 6)
- 2. Model Aggregation approaches (Elliott, Gargano, and Timmerman, 2013).

# Part III: Evaluating and Comparing Forecasting Performance

#### VI. Comparing forecasting performance: Horse races and p-hacking

1. Comparisons of forecast performance. (<u>ET chapter 17</u>, Clark and McCracken 2001, Diebold and Mariano 1995, Giacomini and White, 2006)

- Evaluating and comparing many forecasting models (White, 2000, Sullivan, Timmermann and White, 1999, Romano and Wolf, 2005, Hansen, Lunde, and Nason, 2011)
- 3. Data mining and p-hacking (Harvey, Liu, and Zhu, 2016)
- 4. Comparing forecasting performance in a single cross-section (Qu, Timmermann and Zhu, 2020)

#### How to apply:

The course will take place online in the evenings for Europe, from 5pm CEST:

- June 1st lecture (3 hours)
- June 3rd lecture (3 hours)
- June 4th practice (1.5 hours)
- June 7th lecture (3 hours)
- June 8th practice (3 hours)

Candidates who have a CEPR profile should apply by submitting their CV online at <u>portal.cepr.org/eabcn-training-school-recent-developments-forecasting</u> by 6pm (UK time), 7 May, 2021. If you do not currently have a CEPR profile, please create a new one <u>here</u> and then click on the registration link.

PhD students should also send a statement that specifies the ways participating in the school will be useful for their current research (max 300 words).

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

#### **About the Instructors:**

**Graham Elliott** is a professor of economics. He works in the field of econometrics, developing statistical methods for economic and other applications. He is a fellow of the Center for Applied Macroeconomic Analysis (CAMA), author of the reference/text "Economic Forecasting" jointly with Allan Timmermann, former co-editor of the International Journal of Forecasting (IJF) and co-editor of Volumes 1 and 2 of the Handbook of Forecasting.

Allan Timmermann holds a Atkinson/Epstein Chair in Management Leadership at the Rady School of Management and is also a professor in economics at UC San Diego's department of economics since 1994. He obtained his PhD from University of Cambridge after initial economics training at the University of Copenhagen. Timmermann is a very productive scholar in finance and applied econometrics. He serves as an associate editor on leading journals in finance, economics and forecasting including Journal of Business and Economic Statistics, Journal of Economic Dynamics and Control, Journal of Financial Econometrics, and Journal of Forecasting. He has published in journals such as Journal of American Statistical Association, Review of Economic Studies, Journal of Finance, and Journal of Econometrics.





# Euro Area Business Cycle Network Training School

# Beliefs and Social Networks by

**Johannes Stroebel (New York University Stern School of Business)** 

# **Online Workshop**

14-17 June 2021: Lecture sessions 25 June 2021: Practice sessions

Deadline: 6pm (UK time), Friday 14 May 2021

#### **General Description**

We are pleased to announce details of the latest EABCN Training School, a course over 2 weeks entitled "Beliefs and Social Networks". Professor Johannes Stroebel (NYU Stern School of Business) 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 outline**

This course will introduce participants to a recent literature that studies the interaction between household and investor beliefs, social interactions, financial markets, and the broader macroeconomy. The first lecture explores the role of investor beliefs in affecting financial markets, reviewing a number of recent research papers that combine survey evidence of investor beliefs with (largely behavioural) models of asset pricing. The second class then discusses the determinants of investor beliefs. The third class explores how social interactions affect investor beliefs and behaviors in the housing market. And the fourth class explores how social networks and social interactions affect a range of other economic outcomes, such as mutual fund investments and international trade patterns. In the process, we will introduce a new data set, the Social Connectedness Index, that measures the extent to which indiviudals across various regions are connected on Facebook. Participants are then encouraged to work on a group project with this publicly available data set to explore how social networks affect a range of economic outcomes. Possible projects include using the Social Connectedness Index to explore the propagation of economic shocks across geographies, or to forecast the spread of Covid-19.

The course is divided into four lecture sessions taught over four days, followed by a practice/presentation session the following week.

14-17 June 2021:

**Session 1. Investor Beliefs and Financial Markets** 

Session 2. The Determinants of Household and Investor Beliefs

**Session 3. Social Interactions and Beliefs in the Housing Market** 

**Session 4. Social Networks and Economic Outcomes** 

25 June 2021:

Practice/presentation session: Group Presentations: Data work with Social Connectendess Index

#### Administrative Information:

The course will take place online. More information about logistics will be circulated closer to the date.

Candidates who have a CEPR profile should apply by submitting their CV online at <a href="https://portal.cepr.org/EABCN-TS-June-2021">https://portal.cepr.org/EABCN-TS-June-2021</a> by 6pm (UK Time +1 GMT), **Friday 14 May 2021**. If you do not currently have a CEPR profile, please create a new one <a href="here">here</a> 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 course fee of EUR1000.

#### About the Instructors:

**Johannes Stroebel** is the David S. Loeb Professor of Finance and the Boxer Faculty Fellow at the New York University Stern School of Business, as well as a Research Associate at the National Bureau of Economic Research. He joined NYU in 2013 from the University of Chicago Booth School of Business, where he was the Neubauer Family Assistant Professor of Economics.

Professor Stroebel conducts research in finance, macroeconomics, and real estate economics. He has won numerous awards, including the AQR Asset Management Institute Young Researcher Prize and the Brattle Award for the best paper published in the Journal of Finance. He has also won an Alfred P. Sloan Research Fellowship in Economics. He sits on the editorial boards of the Journal of Finance, the Review of Economic Studies, and the Journal of Political Economy.

Professor Stroebel read Philosophy, Politics, and Economics at Merton College, Oxford, where he won the Hicks and Webb Medley Prize for the best performance in Economics. He earned a Ph.D. in Economics at Stanford University, where he held the Bradley and Kohlhagen Fellowships at the Stanford Institute for Economic Policy Research.





# Euro Area Business Cycle Network Training School

# Formulating and Estimating DSGE Models

By

Martin Eichenbaum (Northwestern University)
Mathias Trabandt (Goethe University Frankfurt)

#### **Online Course**

27 September - 1 October 2021

Deadline: 6pm (UK time), August 22<sup>nd</sup> 2021

#### **General Description**

We are pleased to announce details of the latest EABCN Training School; an online course entitled "Formulating and Estimating DSGE Models". Professors Martin Eichenbaum and Mathias Trabandt 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 applicable for non-network organisations).

#### **Course Contents**

The course is geared towards researchers, academics, practitioners and applied macroeconomists who are interested to learn who to formulate and estimate dynamic stochastic general equilibrium (DSGE) models. The following topics will be covered:

- Review of the New Keynesian model as the course workhorse DSGE model:
  - o Discussion of empirical challenges for the New Keynesian model.
- Structural model estimation using full information (Bayesian) estimation techniques:
  - o Likelihood, Kalman filter, priors, posteriors, Monte Carlo Markov Chains.
- Structural model estimation using limited information (Bayesian) estimation techniques:
  - o (Bayesian) impulse response matching, (Bayesian) moment matching.
- Hands-on MATLAB and DYNARE sessions:
  - Full information Bayesian maximum likelihood estimation of the New Keynesian model.
  - o Limited information Bayesian impulse response matching of the New Keynesian model with an identified monetary policy shock of a structural vector autoregression.

The course will be held online via Zoom and will take place from Monday, September 27 through Friday, October 1. Each day, there will be three hours of lectures and / or practice sessions.

#### How to apply:

The course will take place online between 4pm and 7pm CEST (Frankfurt, Rome, Paris).

Further information will be available to successful applicants. Candidates who have a CEPR profile should apply by submitting their CV online at:

https://portal.cepr.org/eabcn-training-school-ZLB-secular-stagnation-may-2021 by 6pm (UK time), 22 August, 2021. If you do not currently have a CEPR profile, please create a new one here and then click on the registration link.

PhD students should also send a statement that specifies the ways participating in 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 EUR 1,000.

#### **About the Instructors:**

#### Martin Eichenbaum

Martin Eichenbaum is the Charles Moskos Professor of economics and the co-director of the Center for International Economics and Development at Northwestern University. He is a fellow of the American Academy of Arts and Sciences, a fellow of the Econometric Society, a Research Associate of the NBER and an International Fellow of the CD Howe Institute. In addition, he is a Director of the Bank of Montreal (BMO and a member of the academic advisory board of the Federal Reserve Bank of Chicago. Eichenbaum currently serves as the co-editor of the NBER Macro Annual. He was co-editor of the American Economic Review as well as an associate editor of the Journal of Monetary Economics, the American Economic Journal - Macro, and the Journal of Money, Credit and Banking. He has served as a consultant to Goldman Sachs as well as the Federal Reserve Banks of Atlanta, Chicago and San Francisco. He received a PhD in economics from the University of Minnesota.

#### **Mathias Trabandt**

Mathias Trabandt is a Professor of Macroeconomics at the Faculty of Economics and Business at Goethe University in Frankfurt am Main. He is also a Research Fellow at the Halle Institute for Economic Research (IWH) and an Associate Editor at the Review of Economic Dynamics.

Mathias Trabandt's research and teaching interests focus on macroeconomics, monetary economics, public economics, labor economics, international macroeconomics, financial frictions and applied econometrics. His research has been published in e.g. the American Economic Journal: Macroeconomics, Econometrica, the Journal of Applied Econometrics, the Journal Economic Dynamics and Control, the Journal of Economic Perspectives, the Journal of Monetary Economics, the European Economic Review, the American Economic Review (Papers and the Review of Economic Dvnamics. the Review of Studies and the Handbook of Monetary Economics.

Before joining Goethe University Frankfurt in 2021, Mathias Trabandt was a Professor at Freie Universität Berlin. Earlier in his career, Mathias Trabandt was Chief of the ,Global Modeling Studies Section' at the International Finance Division of the Federal Reserve Board of Governors in Washington D.C. and held positions as an economist at the European Central Bank, Deutsche Bundesbank and Sveriges Riksbank. Mathias Trabandt received his Ph.D. in economics from Humboldt University Berlin.





# Euro Area Business Cycle Network Training School

# Business Cycle Measurement and Facts by

James Morley (University of Sydney)

# **Online Workshop**

13-17 September 2021: Lecture and practice sessions

Deadline: 6pm (UK time), Sunday 15 August 2021

#### **General Description**

We are pleased to announce details of the latest EABCN Training School, a course entitled "Business Cycle Measurement and Facts". Professor James Morley (University of Sydney) 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 outline**

This course will introduce participants to some useful methods for trend-cycle decomposition of macroeconomic variables, along with major empirical findings regarding the behavior of output gaps, trend inflation, the natural rate of interest, and household consumption. Nonlinear models and asymmetries will also be considered in order to examine implications for the nature of business cycles and the effectiveness of stabilization policies.

The course is divided into three lecture sessions, each followed by a practice session.

**Day 1** – Monday, Sep 13, 2021

Topic: "Basic univariate approaches to trend-cycle decomposition" Morning lecture session from 09:00 AM - 12:00 NOON (CEST) Afternoon practice session from 01:30PM - 3:30PM (CEST)

Overview of univariate approaches to trend-cycle decomposition, with a focus on unobserved components models, the Beveridge-Nelson filter, and when to consider structural breaks versus stochastic trends

We will look at links between permanent and transitory shocks to the macroeconomy, how to avoid spurious cycles, imposing smoothness on stochastic trends, and testing for structural breaks over time."

**Day 2** – Wednesday, Sep 15, 2021

Topic: "Multivariate methods of trend-cycle decomposition and applications"

Morning lecture session from 09:00 AM - 12:00 NOON (CEST) Afternoon practice session from 01:30PM - 3:30PM (CEST)

Further analysis of trends and cycles based on multivariate unobserved components models and the multivariate Beveridge-Nelson decomposition, with consideration of mixed-frequency systems and robustness to model misspecification

We will look at multivariate estimates of the output gap, trend inflation, the natural rate of interest, and consumption behavior, as well as the reliability of nowcasts of the output gap based on mixed-frequency data.

**Day 3** – Friday, Sep 17, 2021

Topic: "Nonlinear dynamics and business cycle asymmetries" Morning lecture session from 09:00 AM - 12:00 NOON (CEST) Afternoon practice session from 01:30PM - 3:30PM (CEST)

Estimation allowing for nonlinearities, with consideration of different types of business cycle asymmetries and implications for trend-cycle decomposition

We will look at the evidence for nonlinear dynamics in macroeconomic variables and what these nonlinearities suggest about the nature of business cycles and the effectiveness of stabilization policies.

The practice sessions each day will focus on providing hands-on expertise with the methods most relevant to central bankers using EViews, Matlab and/or R.

#### **Administrative Information:**

The course will take place online. More information about logistics will be circulated closer to the date.

Candidates who have a CEPR profile should apply by submitting their CV online at <a href="https://portal.cepr.org/EABCN-TS-June-2021">https://portal.cepr.org/EABCN-TS-June-2021</a> by 6pm (UK Time +1 GMT), **Sunday 15 August 2021**. If you do not currently have a CEPR profile, please create a new one <a href="here">here</a> 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 course fee of EUR1000.

#### **About the Instructors:**

James Morley is a Professor of Macroeconomics at the University of Sydney. He is a Fellow of the International Association for Applied Econometrics and has been a visiting scholar at various policy institutions worldwide, including the Bank of Canada, the Bank for International Settlements, and the Reserve Bank of New Zealand. He is a former President of the Society for Nonlinear Dynamics and Econometrics and is currently Co-Editor of The Economic Record. His research focuses on the empirical analysis of business cycles, stabilization policies, and sources of persistent changes in macroeconomic and financial conditions.



# Euro Area Business Cycle Network Training School

# The ZLB and Secular Stagnation

By

Gauti Eggertsson (Brown University)

#### **Online Course**

24-28 May 2021

Deadline: 6pm (UK time), May 7th 2021

#### **General Description**

We are pleased to announce details of the latest EABCN Training School; an online course entitled "The ZLB and Secular Stagnation". Professor Gauti Eggertsson 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 applicable for non-network organisations).

#### **Course Contents**

The class will cover basic theory of price and output determination in the New Keynesian models and the effect of monetary and fiscal policy. We will cover how the basic framework can explain not only the effect of monetary and fiscal policy under normal circumstances, but also conditions that give rise to hyperinflation and especially conditions giving rise to zero interest rate. The class will also cover theories of prolonged slumps, often termed theories of secular stagnation, and discuss the importance of heterogeneous agent models to understand the transmission of monetary and fiscal policy. The main reference is a new manuscript on monetary economics currently being written by Gauti Eggertsson.

#### How to apply:

The course will take place online in the afternoons for Europe:

- May 24th lecture (3 hours)
- May 25th practice (3 hours)
- May 26th lecture (3 hours)
- May 27th practice (3 hours)
- May 28th lecture (3 hours)

Further information will be available to successful applicants. Candidates who have a CEPR profile should apply by submitting their CV online at:

https://portal.cepr.org/eabcn-training-school-ZLB-secular-stagnation-may-2021 by 6pm (UK time), 7 May, 2021. If you do not currently have a CEPR profile, please create a new one here and then click on the registration link.

PhD students should also send a statement that specifies the ways participating in the school will be useful for their current research (max 300 words).

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

#### **About the Instructor:**

Gauti B. Eggertsson is a macroeconomist and a Professor of Economics at Brown University Economics Department. He received his Ph.D. in Economics from Princeton University in 2004, after having completed his B.S. in economics from the University of Iceland. He has worked at Research Departments of the International Monetary Fund and the Federal Reserve Bank of New York. Since graduation he has also been visiting faculty at Princeton, Yale, and Columbia where he taught international finance and macroeconomics at both graduate and undergraduate level. Eggertsson has published in a variety of professional journals such as the American Economic Review, Brookings Papers on Economics Activity, Economic Journal, Journal of Monetary Economics, Journal of Money, Credit and Banking, Review of Economic Dynamics and the Quarterly Journal of Economics. The main focus of his work is the analysis of monetary and fiscal policy over the business cycle, both from a modern and historical perspective. His work with Michael Woodford in 2003 is by many considered as having provided theoretical underpinning for the policy forward guidance of various central bank following the crisis of 2008.



Euro Area Business Cycle Network Training School

# Modern Macro, Money, and International Finance

by

# **Markus Brunnermeier (Princeton University)**

#### **Online Course**

Teaching (Markus Brunnermeier): June 7, 14, 21, 2021, 2:30-4:00 pm and 4:30-6:00 pm CEST

> TA-Sessions (Sebastian Merkel) : June 9, 16, 23, 2021, 2:30-4:00 pm CEST

> Deadline for application: May 14, 2021

# **General Description**

We are pleased to announce details of the latest EABCN Training School; "Modern Macro, Money, and International Finance". Professor Markus Brunnermeier will teach the course and Sebastian Merkel will give the TA sessions.

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**

This course will expose participants to modern continuous time modelling techniques at the intersection between macroeconomics, monetary economics and (international) finance. The aim of this course is to develop and teach advanced tools and includes a step-by-step solution procedure that participants can apply to a variety of economic problems.

Topics include monetary theory based on financial frictions, non-linear dynamics, endogenous risk and risk premium dynamics, safe assets, fiscal debt capacity, currency competition in an international setting, and as well as digital currency issues.

- 1. A Simple Heterogenous Agents Model
- 2. Endogenous Risk, Price of Risk, and Risk Premium Dynamics
- 3. Money Model with Idiosyncratic Risk, the Fiscal Theory of Price Level, and MMT

- 4. The I Theory of Money, Safe Assets and Flight to Safety
- 5. Welfare: Monetary Policy and Macro-Prudential Policy Interaction
- 6. International Monetary System: A Risk Perspective
- 7. Digital Money, Digital Currency Areas, Digital Dollarization

#### **How to Apply**

The course will take place online in the afternoons for Europe:

- June 7th lecture (3 hours)
- June 9th practice (1.5 hours)
- June 14th lecture (3 hours)
- June 16th practice (1.5 hours)
- June 21st lecture (3 hours)
- June 23rd practice (1.5 hours)

Further information will be available to successful applicants. Candidates who have a CEPR profile should apply by submitting their CV online at: <a href="https://portal.cepr.org/eabcn-training-school-modern-macro-money-and-international-finance">https://portal.cepr.org/eabcn-training-school-modern-macro-money-and-international-finance</a> by 6pm (UK time), 14 May, 2021. If you do not currently have a CEPR profile, please create a new one <a href="here">here</a> and then click on the registration link.

PhD students should also send a statement that specifies the ways participating in 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 course fee of EUR 1000.

#### **About the Instructor:**

Markus K. Brunnermeier is the Edwards S. Sanford Professor at Princeton University. He is a faculty member of the Department of Economics and director of Princeton's Bendheim Center for Finance. He is also a research associate at NBER, CEPR, and CESifo and a member of the Bellagio Group on the International Economy. He is a Sloan Research Fellow, Fellow of the Econometric Society, Guggenheim Fellow and the recipient of the Bernácer Prize granted for outstanding contributions in the fields of macroeconomics and finance. He is/was a member of several advisory groups, including to the IMF, the Federal Reserve of New York, the European Systemic Risk Board, the Bundesbank and the U.S. Congressional Budget Office. Brunnermeier was awarded his Ph.D. by the London School of Economics (LSE).

For more information on EABCN, visit the website.