



# Macroeconomics and Monetary Policy

23 March 2020 | 10:00-18:30

Banque de France, Room 7 - Conference Hall  
31 rue Croix des Petits-Champs 75001 Paris

Mandatory registration [ffj@ehess.fr](mailto:ffj@ehess.fr)  
Subject to availability

Over the last 20 years, there have been significant changes in the environment of the macroeconomy, particularly monetary policy. The Bank of Japan established the quantitative easing policy in March 2001 as a pioneer of so-called “unconventional monetary policies (UMPs).” After the global financial crisis hit the economy in 2008, many major central banks also started UMPs, such as large-scale asset purchases and negative interest rates. One obvious question regarding UMPs is their effects on the macroeconomy and financial markets domestically and internationally. There are also intensive studies on other issues in macroeconomics, such as fiscal and exchange rate policies and innovation and new technology. In this workshop, the researchers from France, Japan, and other countries discuss those issues in macroeconomics and monetary policy.

This workshop is organized in collaboration with FFJ and the Banque de France by Tatsuyoshi Okimoto (2019 FFJ/Banque de France Fellow, Australian National University) and Urszula Szczerbowicz (Banque de France).

# Programme

09:30 | *Welcoming the participants*

10:00 | **Welcome Remark**

Sébastien Lechevalier (EHESS-FFJ)

10:15 | **Session 1: International Policy Issues**

Chair Antoine Berthou (Banque de France)

**International spillover effects of unconventional monetary policies of major central banks**

Tomoo Inoue (Seikei University) and Tatsuyoshi Okimoto (EHESS-FFJ and Australian National University)

**Firm turnover in the export market and the case for fixed exchange rate regime**

Masashige Hamano (Waseda University) and Francesco Pappadà (Paris School of Economics)

**How Policies are perceived in the market for the Japanese government bonds: Evidence from volatility smiles**

Etsuro Shioji (Hitotsubashi University)

12:15 | *Lunch*

13:30 | **Session 2: Macroeconomic Issues**

Chair Caroline Jardet (Banque de France)

**Patents that match your standards: Insights from linking patents and standards**

Antonin Bergeaud (Banque de France) and Julia Schmidt (Banque de France)

**The wobbly economy**

Tomohiro Hirano (Royal Holloway, Univ. of London) and Joseph Stiglitz (Columbia University)

**Business cycle dynamics after the Great Recession: An extended Markov-Switching dynamic factor model**

Catherine Doz (University Paris 1 Panthéon-Sorbonne), Laurent Ferrara (SKEMA Business School), and Pierre-Alain Pionnier (OECD)

15:30 | *Break*

16:00 | **Session 3 Monetary Policy in Japan**

Chair Urszula Szczerbowicz (Banque de France)

**Identifying quantitative and qualitative monetary policy shocks**

Kiyotaka Nakashima (Konan University), Masahiko Shibamoto (Kobe University), and Koji Takahashi (Bank of Japan)

**The BOJ's ETF purchases and its effects on Nikkei 225 stocks**

Kimie Harada (Chuo Univ.) and Tatsuyoshi Okimoto (EHESS-FFJ, Australian National Univ.)

17:20 | **Concluding Remarks**

Sophie Haincourt (Banque de France)

# Speakers



## **Laurent Ferrara (SKEMA Business School)**

Laurent Ferrara is full Professor of International Economics at the SKEMA Business School since September 2019. He was previously Head of the International Macroeconomics Division at the Banque de France in Paris, in charge of the global macroeconomic outlook as well as global policy issues such as exchange rates, commodities or global imbalances. He is also giving lectures at the Paris School of Economics and at the University of Paris Nanterre where he is associated researcher at EconomiX, a CNRS research unit. Professor Ferrara is Director of the International Institute of Forecasters, an international association aiming at bridging the gap between theory and applications in forecasting, through the organization of workshops and conferences and the publication of an academic journal, the International Journal of Forecasting. He is also an associate editor of this journal. Professor Ferrara holds a PhD in

Applied Mathematics from the University of Paris North (2001) and a Research Habilitation in Economics from the University of Paris 1 – Panthéon – Sorbonne (2007). His academic research mainly focuses on international economics, international finance, macroeconomic forecasting, non-linear econometric modelling and business cycle analysis. He published more than 50 papers in international and national academic journals, chapters in books, as well as books on international macroeconomics and on time series modelling.

### **Title: Business cycle dynamics after the Great Recession: An extended Markov-Switching dynamic factor model**

Joint with Catherine Doz (University Paris 1 Panthéon-Sorbonne) and Pierre-Alain Pionnier (OECD)

The Great Recession and the subsequent period of subdued GDP growth in most advanced economies have highlighted the need for macroeconomic forecasters to account for sudden and deep recessions, periods of higher macroeconomic volatility, and fluctuations in trend GDP growth. In this paper, we put forward an extension of the standard Markov-Switching Dynamic Factor Model (MS-DFM) by incorporating two new features: switches in volatility and time-variation in trend GDP growth. First, we show that volatility switches largely improve the detection of business cycle turning points in the low-volatility environment prevailing since the mid-1980s. It is an important result for the detection of future recessions since, according to our model, the US economy is now back to a low-volatility environment after an interruption during the Great Recession. Second, our model also captures a continuous decline in the US trend GDP growth that started a few years before the Great Recession and continued thereafter. These two extensions of the standard MS-DFM framework are supported by information criteria, marginal likelihood comparisons and improved real-time GDP forecasting performance.



## **Tomohiro Hirano (Royal Holloway, University of London)**

Tomohiro Hirano is an Associate Professor of Economics, Royal Holloway, University of London and Research Associate at Center for Macroeconomics at London School of Economics and Research Fellow at the Canon Institute for Global Studies. Tomohiro Hirano's research mainly focuses on the interactions between asset price bubbles and macroeconomic activities.

### **Title: The wobbly economy**

Joint with Joseph Stiglitz (Columbia University)

This paper explores the standard life-cycle model, showing that under not implausible conditions, multiplicity of momentary equilibria can arise. Multiplicity of momentary equilibria can generate an infinity of rational expectation equilibria, leading to “wobbly” macro-dynamics; this may occur even when under myopic expectations, there is a unique dynamic path. Nonetheless, one can provide a full characterization of the possible patterns of economic dynamics. In particular, we identify four possible patterns, providing a characterization of the parameter values under which each may occur. Most interestingly, under some configurations of the parameter values, bubble-like macro dynamics occur. We show that economic booms exceed a critical point, there is a phase transition from a stable phase to an unstable phase, leading to the possibility of a large-scale collapse and a stagnation trap. We show under what conditions a large-scale collapse and a stagnation trap can occur simultaneously. Finally, we analyze how government policy can affect the equilibrium path, showing how well-designed government policies can ensure that the rational expectations equilibrium is unique, preventing wobbly macro-dynamics and improving social welfare.



### **Tomoo Inoue (Seikei University)**

Tomoo Inoue is Professor at Faculty of Economics, Seikei University in Tokyo, Japan, where he teaches and researches the Applied Econometrics. He holds Bachelor of Art (economics) from Tohoku University, Japan, and Ph.D. from University of California, at San Diego, USA. He has authored a number of scholarly articles. The most recent publication includes: the evaluation of the Bank of Japan's monetary policy effects via a Markov switching vector autoregressive model; the efficiency analysis of housing markets; the dynamic conditional correlations among the government bond yields in the Euro market; and the evaluation of international commodity price shocks to Asian countries by using global VAR models.

### **Title: International spillover effects of unconventional monetary policies of major central banks**

Joint with Tatsuyoshi Okimoto (Australian National University)

This paper examines the effects of unconventional monetary policies (UMPs) by the major central banks, namely the Bank of England (BOE), Bank of Japan (BOJ), European Central Bank (ECB) and the Federal Reserve (Fed) on the international financial markets, taking global spillovers into account. To this end, we apply the global VAR model to 35 countries and one region for the period from March 2009 to July 2019. Our results suggest that, though each domestic asset price has appreciated in response to monetary easing policy shocks of each central bank, the significant and persistent responses are observed for the US and the eurozone. For the UK and Japan, the responses are consistent with prediction, but it lasts only for short-term. Regarding the global influence, the response patterns vary across four assets. Though responses of are mostly limited, that of equity price is worldwide. Moreover, the policy shocks by the Fed and BOJ lasts longer than one quarter. However, once the counter parties' monetary policy variables are included, a striking difference appears only in the response patterns of the eurozone.



### **Tatsuyoshi Okimoto (EHES-FFJ, and Australian National University)**

Tatsuyoshi Okimoto is an Associate Professor of Economics and Finance at the Crawford School of Public Policy, Australian National University and co-editor of Japanese Economic Review and Gendai Finance (journal of Nippon Finance Association in Japanese). He is currently an FFJ/Banque de France Fellow at the Fondation France Japon de l'EHESS. He received his PhD in economics from the University of California, San Diego in 2005 and worked for Hitotsubashi University and Yokohama National University before joining the Australian National University. His current research has focused on Financial Econometrics, Macroeconometrics and International Finance. He has been awarded the GPIF Finance Awards (2017), 2015 Junko Maru Prize, and 2014 Securities Analysts Journal Prize.

### **Title: The BOJ's ETF purchases and its effects on Nikkei 225 stocks**

Joint with Kimie Harada (Chuo University)

This paper examines the impacts of the Bank of Japan's (BOJ) exchange-traded funds (ETFs) purchasing program that has been conducted since December 2010. The program is a part of the BOJ's unconventional monetary policy and has accelerated since the introduction of the Quantitative and Qualitative Easing in April 2013. In this study, the influence of underlying stocks is assessed by comparing the performance of the stocks (those included in the Nikkei 225 and others) using a difference-in-difference analysis. We also separate morning and afternoon returns to control for the fact that the BOJ tends to purchase ETFs when performance of the stock market is weak, in the morning session. We find that the Nikkei 225 component stocks' afternoon returns are significantly higher than those of non-Nikkei 225 stocks when the BOJ purchases ETFs. In addition, the subsample analysis demonstrates that the impact on Nikkei 225 stock returns becomes smaller over time despite the growing purchase amounts. Overall, our results indicate that the cumulative treatment effects on the Nikkei 225 are around 20% as of October 2017.



### **Francesco Pappadà (Paris School of Economics)**

Francesco Pappadà is currently an Invited Professor at Paris School of Economics. He joined Banque de France as a research economist in December 2014, after being a post-doctoral researcher and visiting fellow at HEC Lausanne, University of California Berkeley and Einaudi Institute for Economics and Finance in Rome. His research interests are in macroeconomics and international macroeconomics. He received his Ph.D. in Economics from Paris School of Economics in 2011.

#### **Title: Firm turnover in the export market and the case for fixed exchange rate regime**

Joint with Masashige Hamano (Waseda University)

This paper revisits the case for flexible vs. fixed exchange rate regime in a two-country model with firm heterogeneity and nominal wage rigidity under incomplete financial markets. Dampening nominal exchange rate fluctuations simultaneously stabilizes the firm turnover in the export market. When firms are homogeneous and low productive, the fixed exchange rate regime dominates the flexible one because it reduces the fluctuations in labor demand arising from entry and exit of exporters following a demand shock. We also show that an alternative regulation policy in the export market does not rule out the possible adoption of a managed floating regime.



### **Julia Schmidt (Banque de France)**

Julia Schmidt is a research economist at the Banque de France's International Macroeconomics Division. Her research concerns international economics, among others international banking, as well as the role of product and technology standards for macroeconomic dynamics and trade flows. She holds a PhD in international economics from the Graduate Institute (IHEID) Geneva.

#### **Title: Patents that match your standards: Insights from linking patents and standards**

Joint with Antonin Bergeaud (Banque de France)

Patent data have been used as indicators of technological progress, but judging the technological and thus economic value of a patent is inherently difficult. On the other hand, data on technological standardization can help identify technology adoption at the aggregate level: when technologies are standardized, this represents an industry-wide consensus to adopt a certain technology. By matching patents to standards using text-mining techniques, we are able to characterize the economic value of a patent. We show that patents that are strongly linked to standards are economically more valuable. We use our new measure to investigate how a standard affects the life-cycle of a technology and analyze the firm-level responses to patenting.



### **Masahiko Shibamoto (Kobe University)**

Masahiko Shibamoto is an Associate Professor in the Research Institute for Economics and Business Administration (RIEB) at Kobe University. He was a visiting scholar at University of California, San Diego, and Williams College. He received his Ph.D in Economics from Osaka University in 2007. His main research areas are empirical macroeconomics, monetary policy, and Japanese economy.

#### **Title: Identifying quantitative and qualitative monetary policy shocks**

Joint with Kiyotaka Nakashima (Konan University) and Koji Takahashi (Bank of Japan)

This paper proposes a method for identifying quantitative and qualitative monetary policy shocks in the balance sheet operations of a central bank. The method is agnostic and flexible as it relies on no assumptions on how the size and composition of the central bank's balance sheet will respond after the bank makes a policy decision. We identify two types of policy shocks as "anticipated" shocks that best portend the current and future paths of these policy instruments in response to them. We obtain evidence that qualitative easing shocks have expansionary effects on the economy while quantitative easing shocks do not.



## **Etsuro Shioji (Hitotsubashi University)**

Etsuro Shioji is a Professor at the Department of Economics, Hitotsubashi University. His main research area is macroeconomics. After receiving his Ph.D. from Yale University, he has taught at Universitat Pompeu Fabra and Yokohama National University, before joining his current workplace. He also serves as a Councillor to the Institute for Monetary and Economic Studies of the Bank of Japan, and is also an Advisor to the Research Institute of Capital Formation of the Development Bank of Japan.

### **Title: How policies are perceived in the market for the Japanese government bonds: Evidence from volatility smiles**

This paper studies how policy announcements and related news affect perceptions of the participants in the market for the Japanese Government Bonds (JGBs). Despite that the gross government debt to GDP ratio now exceeds 200%, the JGB market has remained surprisingly calm. Is this because, as some have suggested, the Bank of Japan exerts dominant influence over the market? Or, if we look in the right place, could we uncover even a trace of anxiety in the minds of the market participants? To answer these questions, this paper utilizes information from the market for the JGB Futures Options: options are essentially insurances against future price risks, and their prices are expected to contain useful information about the subjective probability distributions that the investors have in their mind. Based on the model of Black (1976) and using observed option prices, I derive implied volatility at different strike prices. This produces the so-called “volatility smile”. I study how the smile curve has responded to various monetary policy announcements and news related to future fiscal solvency. The study confirms the dominant influence of the central bank policies.