

International Workshop “Monetary Policy When Heterogeneity Matters”

Organized by the Banque de France Fellow of the Fondation France-Japon de l'EHESS and the Banque de France Fellow at Paris School of Economics

February 3rd 2017, 09:50-18:30, 190, avenue de France, room 640 (6th floor)

Program

09:50-10:00 Opening remarks, by **Christian Sautter** (Vice President of the Fondation France-Japon de l'EHESS)

Session 1

Chair: **Florin Bilbiie** (PSE and Université Paris 1)

10:00-11:00 **Minchul Yum** (Mannheim)
"Wealth and Labor Supply in an Incomplete Markets Model"
Discussant: **Patrick Pintus** (Banque de France)

11:00am-12:00 **Patrick Pintus** (Banque de France)
"The Inverted Leading Indicator Property and Redistribution Effect of the Interest Rate" (joint with Yi Wen and Xiaochuan Xing)
Discussant: **Eric Mengus** (HEC Paris)

12:00-14:00 Lunch

Session 2

Chair: **Patrick Pintus** (Banque de France)

14:00-15:00 **Gaetano Gaballo** (Banque de France and European Central Bank)
"Forward Guidance and Heterogeneous Beliefs" (joint with Philippe Andrade, Eric Mengus and Benoît Mojon)
Discussant: **Takeki Sunakawa** (EHESS and Kobe)

15:00-16:00 **Takeki Sunakawa** (EHESS and Kobe University)
"Natural Rate of Interest in Nonlinear DSGE Models" (joint with Yasuo Hirose)
Discussant: **Michel Julliard** (Banque de France)

16:00-16:30 Break

Session 3

Chair: **Takeki Sunakawa** (EHESS and Kobe)

16:30-17:30 **Taisuke Nakata** (Federal Reserve Board)
"The Risky Steady State and the Interest Rate Lower Bound" (joint with Timothy Hills and Sebastian Schmidt)
Discussant: **Pablo Winant** (Bank of England)

17:30-18:30 **Florin Bilbiie** (PSE and Université Paris 1)
"Optimal Forward Guidance"
Discussant: **Taisuke Nakata** (Federal Reserve Board)

18:30 Concluding Remarks

LIST OF PRESENTERS AND PAPERS

Minchul Yum (Mannheim)

"Wealth and Labor Supply in an Incomplete Markets Model"

Several recent studies have pointed out that in an incomplete markets model with heterogeneous households, the participation rate strongly decreases with wealth cross-sectionally. This is in contrast to U.S. data showing relatively flat participation rates across wealth quintiles. I find that it is sufficient to incorporate government lump-sum transfers, the size of which is in line with the data, and proportional factor income taxation into an otherwise standard model to make the model consistent with the data. I show that matching the observed participation rates by wealth quintiles has important implications for aggregate labor supply responsiveness to wage changes.

Patrick Pintus (Banque de France)

"The Inverted Leading Indicator Property and Redistribution Effect of the Interest Rate" (joint with Yi Wen and Xiaochuan Xing)

The interest rate at which US firms borrow funds has two features: (i) it moves in a countercyclical fashion and (ii) it is an inverted leading indicator of real economic activity: low interest rates today forecast future booms in GDP, consumption, investment, and employment. We show that a Kiyotaki-Moore model accounts for both properties when interest-rate movements are driven, in a significant way, by self-fulfilling shocks that redistribute income away from lenders and to borrowers during booms. The credit-based nature of such self-fulfilling equilibria is shown to be essential: the dynamic correlation between current loanable funds rate and future aggregate economic activity depends critically on the property that the interest rate is state-contingent. Bayesian estimation of our benchmark DSGE model on US data shows that the model driven by redistribution shocks results in a better fit to the data than both standard RBC models and Kiyotaki-Moore type models with unique equilibrium.

Gaetano Gaballo (Banque de France and European Central Bank)

"Forward Guidance and Heterogeneous Beliefs" (joint with Philippe Andrade, Eric Mengus and Benoît Mojon)

Central banks' announcements that future interest rates will remain low could signal either a weak future macroeconomic outlook – which is bad news – or a future expansionary monetary policy – which is good news. In this paper, we use the Survey of Professional Forecasters to show that these two interpretations coexisted when the Fed engaged into date-based forward guidance policy between 2011Q3 and 2012Q4. We then extend an otherwise standard New-Keynesian model to study the consequences of such heterogeneous interpretations. We show that it can strongly mitigate the effectiveness of forward guidance and that the presence of few pessimists may require keeping rates low for longer. However, when pessimists are sufficiently numerous forward guidance can even be detrimental.

Takeki Sunakawa (EHESS and Kobe)

"Natural Rate of Interest in Nonlinear DSGE Models" (joint with Yasuo Hirose)

This paper investigates how and to what extent nonlinearity including the zero lower bound on the nominal interest rate affects the estimates of the natural rate of interest in a New Keynesian model. We find that the estimated natural rate of interest in a nonlinear model is substantially different from that in its linear counterpart due to uncertainty stemming from the zero lower bound, and that other nonlinearities such as price and wage dispersion, from which a linear model abstracts, play a minor role in identifying the natural rate.

Taisuke Nakata (Federal Reserve Board)

"The Risky Steady State and the Interest Rate Lower Bound" (joint with Timothy Hills and Sebastian Schmidt)

Even when the policy rate is currently not constrained by its effective lower bound (ELB), the possibility that the policy rate will become constrained in the future lowers today's inflation by creating tail risk in future inflation and thus reducing expected inflation. In an empirically rich model calibrated to match key features of the U.S. economy, we find that the tail risk induced by the ELB causes inflation to undershoot the target rate of 2 percent by as much as 45 basis points at the economy's risky steady state. Our model suggests that achieving the inflation target may be more difficult now than before the Great Recession, if the recent ELB experience has led households and firms to revise up their estimate of the frequency of ELB events.

Florin Bilbiie (Paris School of Economics and Université Paris 1 Panthéon-Sorbonne)

"Optimal Forward Guidance"

For how long should central banks keep interest rates low, beyond the end of a liquidity trap? I solve analytically for the optimal duration of forward guidance (FG), modelled stochastically through a probability of low interest rates once out of the trap. Welfare-maximizing FG balances the benefit of higher consumption (and lower volatility) today with the cost of higher volatility once the trap is over. Its main determinants are the trap duration, the severity of the recession, and a composite parameter capturing the elasticity of aggregate activity to news. A simple rule (announcing an FG duration of half the trap duration times the interest rate spread, plus half a period) is close to optimal. I apply this analytical apparatus to models with heterogeneous agents, and study how optimal FG depends on informational asymmetries, financial constraints, and unemployment risk.