The Search-Theoretic Approach to Liquidity

By
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Deadline: 1 March 2013

General Description

We are pleased to announce details of the latest EABCN Training School; a three-day course entitled “The Search-Theoretic Approach to Liquidity”. Ricardo Lagos 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 Detail

The notion of liquidity is elusive in Economics. However notice that all the different notions of liquidity (marketability, trading delays, intermediation fees, price impact) have something in common: they describe specific aspects of the mechanism of exchange. Thus in order to study the determinants and the normative, positive, and quantitative implications of the liquidity of assets and markets, it seems desirable, even necessary, to work within a framework that is explicit about the mechanism of exchange.

The notion of liquidity requires an explicit model of: (i) decentralized trade (who trades with whom), (ii) determination of terms of trade (an explicit mechanism that determines quantities and prices exchanged in individual transactions among traders), (iii) trading delays (the time it takes to find a trading partner or the “right” trading partner), and (iv) extensive margins (the effect of the number of traders on trading activity). The search-theoretic approach is natural as it incorporates these “trading frictions” explicitly and parsimoniously.

This course will offer an introduction to a growing body of work in Monetary Economics and Finance that uses Search Theory to further the view that trading frictions and the mechanics of trade are important for understanding asset markets in general, and for sharpening our focus on financial liquidity in particular.

The following programme outlines the structure of the course:

Section I. Background.
The purpose of this section is to introduce the basic “tools of the trade” (e.g., Poisson processes and Bellman equations in continuous time) as well as a useful notion of search equilibrium for an economy with production and exchange.
a. [0.5 hours] Elementary dynamic programming and search theory in continuous time.
b. [1.5 hours] Production and exchange in search equilibrium: Diamond (1982).

Section II. An Introduction to the Search Theory of Money.

This section introduces a class of models that use search theory to provide micro foundations for monetary exchange


Section III. The Modern Search Theory of Money.

This section introduces a class of search environments that remain analytically tractable even without imposing these severe restrictions (such as on money holdings), and at the same time can be used for theoretical and quantitative monetary policy analysis.


Section IV. Liquidity and Asset Pricing.

The search theory of money has been successful for explaining the grandfather of all asset pricing puzzles: the existence of fiat money—an asset that is a formal claim to nothing yet sells at a positive price. This section shows how the basic conceptual insights from the pure theory of money can be used to shed new light on some classic asset-pricing questions.

a. [1.5 hours] Liquidity and the asset pricing puzzles: Lagos (2010b).
b. [0.5 hours] Liquidity, asset prices, and monetary policy: Lagos (2010a, 2010c)

Section V. Search in Finance: Over-the-Counter Markets.

Trade in real-world financial markets is often distinctively non-Walrasian. Large asset classes are traded over the counter (OTC), i.e., in markets where trade is completely decentralized, carried out by traders who must first find a counterparty, and then negotiate prices and quantities bilaterally. Examples of securities that trade in OTC markets include bonds, currencies, derivatives, certain stocks, and Federal Funds. This section gives an introduction to some recent work that uses search theory to model the distinctive features of the market microstructure of OTC markets.


Administrative Information:

The course will take place in Lisbon at the Banco de Portugal and participants will be invited to make their own arrangements regarding their accommodation and meals. Further information will be available to successful applicants. Candidates should fill in the enclosed form and return it to CEPR’s Events Officer, Nicola Steele (nsteele@cepr.org) by March 1st, 2013. We ask that you send a current version of your CV with your application. EABCN gratefully thanks the generous assistance from Banco de Portugal.

About the Instructor:

Ricardo Lagos has been professor at New York University since 2011. His main research interests are macroeconomic theory, search, monetary policy and labour economics. He obtained his Ph.D. from University of Pennsylvania. He has been lecturer at London School of Economics and senior economist at Minneapolis Fed. He is associate editor of Journal of Economic Theory, Journal of Monetary Economics and Review of Economic Dynamic. He is a research associate of NBER.