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Research Fields

Macro-Finance, Asset Pricing, Banking, Monetary Economics

References

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Education

2019	PhD in Economics, Sciences Po Paris
2013	M.Sc. in Economics, Ecole Polytechnique

Professional Experience

European Central Bank:

2017- ...	Economist (Graduate Programme) in the Directorate General Research
2016-2017	PhD Trainee in the Directorate General Monetary Policy

Grants and Honors

July 2018	Distinguished CESifo Affiliate Award in Macro, Money and International Finance
2017-2018	Dissertation Fellowship, Macro-Financial Modeling Group (University of Chicago)
2013-2016	Contrat Doctoral, FNSP
July 2013	Best Master Thesis Award, Department of Economics, Sciences Po
June 2012	Research Center Award, Ecole Polytechnique

Job Market Paper

Treasury Debt and the Pricing of Short-Term Assets

Abstract: In most advanced economies, the central bank keeps inflation stable by controlling short-term rates. However, since the financial crisis, the supply of short-term debt from the Treasury has been increasingly associated with changes in the yields of short-term money market assets. This puzzling pattern contrasts with the pre-crisis experience and raises questions about the ability of the Fed to fulfill its mandate. In this paper, I document and rationalize these developments in an intermediary asset pricing model with heterogeneous banks subject to a liquidity management problem and regulation. The combination of large amounts of excess reserves, together with a more stringent capital regulation, creates an inaction region in which traditional banks cease to intermediate liquidity to shadow banks. As a consequence, the pricing of reserves disconnects from the pricing of other short-term assets and leaves liquidity premia of these assets free to react to variations in the supply of Treasury bills. The model accurately predicts post-crisis variations in T-bill and repo yields, as well as in reverse repo volumes from the Fed.

Other Papers

Unconventional Monetary Policy and Funding Liquidity Risk

(with Matthieu Darracq-Pariès, ECB and Adrien d'Avernas, SSE)

Abstract: This article investigates the efficiency of various monetary policy instruments to stabilize asset prices in a liquidity crisis. We propose a macro-finance model featuring heterogeneous banks subject to funding risk. When banks are well capitalized, they have access to money markets and efficiently mitigate funding shocks. When aggregate bank capital is low, a vicious cycle between declining asset prices and funding risks arises. The central bank can partially counter these dynamics. Increasing the supply of reserves reduces liquidity risk in the traditional banking sector but fails to reach the shadow banking sector. When this sector is large, as in the US in 2008, further asset prices stabilization can be obtained by directly purchasing illiquid securities.

Innovation Diffusion and the Financial Cycle

(with Adrien d'Avernas, SSE)

Abstract: Following a financial crisis, the diffusion of innovation declines, and productivity growth slows down. This article demonstrates that this pattern can be rationalized in a standard macro-financial model with heterogeneous risk aversion when implementing innovation is risky. In the model, large adverse shocks to productivity affect risk-tolerant agents more than risk-averse agents and increase aggregate risk aversion. As risk-bearing capacities are reduced, the diffusion of innovation slows down. As in the data, the model generates significant time-varying risk premia and hysteresis after a financial crisis.

How Stable Are Stablecoins?

Abstract: Stable coins are cryptocurrencies designed to peg their value to an official currency. This paper proposes a framework to analyze their stability. The model interprets the token as the liability of a virtual bank with rule-based dynamic collateral management. With a perfectly liquid market for the collateral asset, stablecoins can avoid bank-runs and maintain the peg. To do so, the digital bank must be automatically liquidated when the collateral value drops below a certain threshold. With an imperfect market for the collateral asset, the scheme does not rule out the run equilibrium. The analysis points out to potential fragility in existing stablecoins scheme and policy implications for regulators.

A Solution Method for Continuous-Time General Equilibrium Models

(with Adrien d'Avernas, SSE)

Abstract: We propose an algorithm capable of solving in a fast and standardized way a general class of continuous-time asset pricing models, including heterogeneous agent models. These models typically require to solve for a system composed of a Hamilton-Jacobi-Bellman equation for each agent, coupled with a system of algebraic equations. The resolution of such a system of PDEs is a tedious problem as approximation errors tend to amplify and create an explosive dynamic. We rely on a Finite-Difference algorithm and show how using a Brocot-Tree decomposition as advocated by Bonnans, and al. (2004) allows for fast and stable convergence in settings with up to two endogenous and stochastic state variables.

Seminars and Conferences

(co-author*, discussant**)

2019   SUERF Colloquium, ITAM-PIER Conference in Macroeconomics*, 50th MMF Conference (LSE), 10th Advances in Macro-Finance Tepper-LAEF Conference*, NFA*, 27th Finance Forum, Fed Board*, CESifo - Money Macro and International Finance**, Hamburg University

2018   MFM New York Winter Meeting, Princeton Finance seminar, CESifo - Money Macro and International Finance, IBEO workshop, Sciences Po, European Central Bank, Financial Market Liquidity Conference, INET Oslo Financial Stability workshop

2017   CITE workshop (U Chicago), Sciences Po, European Central Bank, Norges Banks

Teaching Experience

Fall 2015   Quantitative Methods (graduate), Sciences Po

Spring 2015   Macroeconomics (undergraduate), Sciences Po

Spring 2014   Macroeconomics (undergraduate), Sciences Po

Languages

English (Fluent), French (Native), Dutch (Intermediary)