

# STELIOS FOURAKIS

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## Education

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2016-2022      Ph.D. in Economics, University of Minnesota  
Job Market Paper: “Sovereign Default and Government Reputation”  
Committee: Manuel Amador, Tim Kehoe, Chris Phelan, Juliana Salomao

2009-2013      B.A. in Political Economy, *cum laude*, Georgetown University

## Research Interests

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Macroeconomics, International Economics, Sovereign Debt

## Current and Past Positions

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2022-Present      Assistant Professor, Department of Economics, Johns Hopkins University

2019      Visiting Graduate Student, Department of Economics, Princeton University

2018-2022      Research Assistant to Manuel Amador, Federal Reserve Bank of Minneapolis and Department of Economics, University of Minnesota

2014-2016      Economist, Pacific Economics Group Research, LLC

## Fellowships and Awards

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2017-2018      Mythili V. and Varadarajan V. Chari Fellowship, Heller-Hurwicz Economics Institute, University of Minnesota

2017      Dr. Harald Uhlig Award in Macroeconomics, Department of Economics, University of Minnesota

2016-2017      Christopher Sims Fellowship, Heller-Hurwicz Economics Institute, University of Minnesota

## Teaching Experience

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2023      Limited Commitment in Macroeconomics (PhD Course), Johns Hopkins University

2023      Debt Crises and Financial Crises (Undergraduate Course), Johns Hopkins University

2018      Principles of Macroeconomics, University of Minnesota, Teaching Assistant

2017      Principles of Microeconomics, University of Minnesota, Teaching Assistant

## Working Papers and Works in Progress

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### 1. “Sovereign Default and Government Reputation”

*Abstract:* In this paper, I build a flexible theoretical model of sovereign borrowing, default, and renegotiation with borrower reputation. There is asymmetric information about the government’s “type”, and reputation is the market belief that it is “responsible” and therefore less likely to default. I calibrate the model using data on how countries’ credit histories affect the prices they face and validate its predictions about the effects of borrowing on interest rate spreads in the data. Using the model, I show that countries that have recently defaulted have poor reputations because they rapidly run up their debts prior to default, not because the default decision itself is revealing. I also show that, for countries facing non-trivial levels of default risk, the reputational benefits of

repayment are less than 0.5 basis points of consumption. Policies that disrupt the signalling motives induced by asymmetric information, such as transparency initiatives or fiscal rules, can have substantial negative implications for welfare (losses of 0.23% – 0.85% of permanent consumption), because they lead to increased overborrowing by the government.

## 2. “Liquidity, Default Risk, and the Information Sensitivity of Government Debt”

*Abstract:* In this paper, I document that, during the height of the Eurozone Debt Crisis in Spain, 1.) Spanish government bonds became substantially less liquid and less traded on secondary markets, 2.) the first appearance of this phenomenon lagged far behind the initial jump in interest rate spreads in late 2008, and 3.) it persisted throughout the period of peak interest rate spreads and only subsided after the worst of the crisis had passed. I argue that these facts are related and best explained by a model of sovereign default that features secondary markets in which it is possible that some traders have private information. I then build a model in which some traders have private information about the country’s future economic conditions and show that this allows the model to reproduce both the delayed reaction of bid-ask spreads as well as their peak and behavior during the height of the crisis. Using the model, I measure the losses to investors associated with variation in liquidity during debt crises. Finally, I validate the model by showing that the model’s predicted relationship between current, realized bid-ask spreads and future values of GDP allows me to forecast GDP significantly better than a standard, benchmark forecast.

## 3. “Sovereign Debt Auctions with Strategic Interactions”, with Ricardo Alves Monteiro

*Abstract:* In this paper, we compare how different protocols for sovereign debt auctions affect borrowing, the cost of debt and welfare, when default risk is a concern. To do so, we build a theoretical model of sovereign borrowing and default with auctions and asymmetric information. We calibrate the model to the Portuguese economy under the discriminatory price protocol, prior to its bailout in 2011. Using the calibrated model we perform a counterfactual exercise by changing the auction protocol. We find that the uniform price protocol yields higher welfare than the discriminatory price protocol, and that these gains are highest during crises (up to 0.6% of permanent consumption). This result is consistent with the observed switch to a uniform price protocol (for long term debt). Our accounting for dynamic effects is crucial for this result. Given standard values for risk aversion of the borrowing country, the discriminatory price protocol performs better than the uniform under a single auction setting. Once we allow for repeated auctions, however, the uniform price protocol is preferred under the calibrated model. In fact, when default risk is a concern, the uniform price protocol provides better incentives for borrowing over time, as well as protecting investors from static dilution within an auction. Both lead to much better prices for the government, which more than justifies forgoing the insurance mechanism provided by the discriminatory protocol.

## 4. “Sovereign Default under Imperfect Information”

*Abstract:* In this paper, I document that, during the Eurozone Debt Crises, 1.) forecasts of output were persistently biased upwards, 2.) the afflicted countries all saw steep increases in their government debt to GDP ratios and their external government debt to GDP ratios, and 3.) spreads reacted slowly to these increases. I argue that these three facts are related and connect them through a model of sovereign default which features incomplete information with respect to the persistent component of output. I then show that the inclusion of information imperfections allows the model to produce patterns during and before crises which better match the patterns in the data than the benchmark model.

## 5. “Computing Sovereign Debt Models: Why So Hard?”, with Mark Aguiar and Manuel Amador

*Abstract:* Sovereign debt models with long-duration bonds are notoriously hard to compute. Using a simplified environment of the standard Eaton & Gersovitz (1981) model with outside option shocks, we show that equilibria in pure strategies may not exist, explaining the lack-of-convergence issues encountered in the quantitative literature. We propose an algorithm for computing mixed-strategy equilibria. For some parameterizations, we uncover millions.

## 6. “Long Term Debt Models: Solution Methods Matter”

*Abstract:* Over the last decade, long term debt has become a standard feature in quantitative studies of sovereign default. A wide variety of numerical solution methods have been used in solving these models, but little is known about the relative performance of various methods and their sensitivity to parameters and grid specifications. In

this paper, I provide a survey of the commonly used methods and then test their performance. For long run simulations (often used to calculate the moments used to estimate the model), I find that results (both within each method, varying grid fineness, and across methods) are relatively stable. However, for short run simulations (often used to analyze the model's prediction about a specific country's experience at a specific time of interest), the results can vary dramatically. In some cases, the results even change qualitatively. Using these results, I provide guidance on when each method is likely to be robust and when it is probably the case that results are not robust to the choice of solution method (and specific parameters of that solution method, such as grid fineness).

7. "The Welfare Effects of Bailout Out Governments"
8. "Inequality, Redistribution, and Sovereign Risk", with Monica Tran Xuan
9. "The Puzzling Behavior of Spreads During Covid", with Loukas Karabarbounis
10. "Optimal Joint Bond Design", with Eduardo Davila and Charles-Henri Weymuller

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## **Publications**

1. "On the Welfare Losses from External Sovereign Borrowing," with Mark Aguiar and Manuel Amador, *IMF Economic Review*, 68(1), 2020: 163-194.

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## **Presentations**

1. "The Welfare Effects of Bailing Out Governments": Yale School of Management Junior Finance Conference, September 2022
2. "Sovereign Default and Government Reputation": Chicago Fed Rookie Conference, November 2021; University of California, Davis, January 2022; Ohio State University, January 2022; Johns Hopkins University, February 2022; University of Chicago Booth School of Business, February, 2022; Society for Economic Dynamics Annual Meeting, Madison, WI, July 2022; University of Maryland, Baltimore County, March 2023; Philly Fed Junior Macro Conference, April 2023; IMF Conference on Fiscal Policy in an Era of High Debt, November 2023
3. "The Puzzling Behavior of Spreads During Covid": Federal Reserve Bank of Philadelphia, September 2023; Washington Area International Finance Symposium, September 2023; 2023 Becker Friedman Institute International Macro-Finance Conference, November 2023; Queen's University, January 2023 (scheduled)

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## **Professional Activities**

1. Referee for *Review of Economic Studies*, *Journal of International Economics*, *Journal of Monetary Economics*, *Journal of Political Economy* *Macroeconomics*, *Review of Economic Dynamics*, *Review of World Economics*

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## **Skills**

*Programming*: Julia, R, SQL, Stata, and Excel

*Language*: English (native), German (intermediate), Greek (intermediate), Arabic (intermediate)

*Interests*: Baking and cooking; classic movies; prestige TV