## **University of Minnesota - Twin Cities**

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Curriculum Vitae Fall 2020

## **FERNANDO ARCE**

**Personal Data** 

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## **Major Fields of Concentration**

Macroeconomics, International Economics, International Finance

## **Education**

Degree	Field	Institution	Year
PhD	Economics	University of Minnesota (expected)	2021
MA	Economics	University of Minnesota	2018
MSc	Economics for Development with distinction	University of Oxford	2013
Dipl. Ing.	Statistics and Economics	ENSAE - Paris Tech	2013

## **Dissertation**

Title: "Essays on International Borrowing"

Dissertation Advisors: Professor Manuel Amador and Professor Timothy Kehoe

**Expected Completion: Summer 2021** 

### References

Professor Manuel Amador	(612) 624-4060 (612) 204-5781 amador@umn.edu	Department of Economics University of Minnesota 4-101 Hanson Hall 1925 Fourth Street South
Professor Timothy Kehoe	(612) 625-1589 (612) 204-5533 tkehoe@umn.edu	Minneapolis, MN 55455
Dr. Javier Bianchi	(612) 204-5934 javieribianchi@gmail.com	Research Department Federal Reserve Bank of Minneapolis 90 Hennepin Avenue
Dr. Marco Bassetto	bassetto@nber.org	Minneapolis, MN 55401

### **Honors and Awards**

2019 - 2020	Doctoral Dissertation Fellowship, University of Minnesota, Minneapolis, Minnesota	
2018	Second Place, Third Year Paper Competition, Department of Economics, University of Minnesota,	
	Minneapolis, Minnesota	
2016	Distinguished Teaching Assistant, Department of Economics, University of Minnesota, Minneapolis,	
	Minnesota	
2015	Bert and Susan Hill Gross Fellowship, Department of Economics, University of Minnesota,	
	Minneapolis, Minnesota	
2013	Arthur Lewis Prize for Excellence in Development Economics, Department of Economics, University	
	of Oxford, Oxfordshire, U.K	
2012	Mobility Scholarship, ENSAE ParisTech, Malakoff, France	
2008 - 2013	Excellence - Major Grant Program, French Ministry of Foreign Affairs, Paris, France	
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## **Teaching Experience**

Fall 2020 - present	Teaching Assistant, Department of Economics, University of Minnesota, Minnesota, Minnesota. Led	
	recitations for advanced undergraduate Microeconomic Analysis, Advanced Topics in Economics-	
	Uncertainty and Information. This course was delivered online.	
Summer 2017	Instructor, Department of Economics, University of Minnesota, Minnesota, Minnesota. Instructor for	
	International Trade, Writing Intensive.	
2016 - 2017	Teaching Assistant, Department of Economics, University of Minnesota, Minnesota, Minnesota. Led	
	recitations for the Ph.D. level <i>Microeconomic Theory</i> sequence.	
2012	Teaching Assistant, University Paris I Panthéon Sorbonne, Paris, France. Led recitations for	
	Introduction to Financial Markets	

# **Research Experience**

2019 - Present	Visiting Scholar, Research Department, Federal Reserve Bank of Minneapolis, Minneapolis,
	Minnesota
2017 - 2019	Research Analyst, Research Department, Federal Reserve Bank of Minneapolis, Minneapolis,
	Minnesota. Research Assistant for the Economic Analysis Group. Policy work: Developed a model of
	debt sustainability and an index of income inequality for the US.
2013 - 2015	Research Fellow, Research Department, Inter-American Development Bank, Washington, DC.
	Research assistant for Andrew Powell. Policy work: Editing the Macreconomic Reports 2014, 2015.
	Constructed and updated a dataset of Inflection Expectations REVELA.
Summer 2012	Research Assistant, Research Department, French Development Agency, Paris, France. Research
	Assistant for Bastien Bedossa and the Macroeconomic Analysis and Country Risk Unit.

# **Working Papers**

## **Presentations**

## **Presentations by Coauthor**

<sup>&</sup>quot;Private Overborrowing under Sovereign Risk," job market paper, in progress

<sup>&</sup>quot;A Macroprudential Theory of International Reserves," with Julien Bengui and Javier Bianchi, under submission

<sup>&</sup>quot;Optimal Redistribution in a Sudden Stop-Prone Economy," with Monica Tran Xuan, in progress

<sup>&</sup>quot;Skill Premium, Trade, and Human Capital," with Camilo Alvarez and Samuel Bailey, in progress

<sup>&</sup>quot;A Macroprudential Theory of International Reserves," present at the Midwest Macroeconomics Meeting May 2019, Athens, GA; Society for Economic Dynamics Annual Meeting, June 2019, St. Louis, MO; IMF Brown Bag Seminar, IMF, Washington, DC, July 2019; Allied Social Science Association Annual Meeting, January 2020, San Diego, CA.

"A Macroprudential Theory of International Reserves," presented at -BIS-BoE-ECB-IMF Basel Workshop, May 2019; 3rd IMF Annual Macro-Financial Research Conference, September 2020.

## **Computer Skills**

Matlab, SAS, Fortran, Python, Stata, LaTex

## Languages

Spanish (native), English (fluent), French (fluent)

### **Abstracts**

"Private Overborrowing under Sovereign Risk," job market paper

This paper argues that excessive international private debt increases the frequency and severity of sovereign debt crises. I develop a quantitative theory of private and public debt that allows me to measure the level of private overborrowing and its effect on the interest rate spread paid on public debt. In an environment where private credit is constrained by the market value of income, individually optimal private borrowing decisions are inefficient at the aggregate level. High private debt increases the probability of a financial crisis. During such crises, drops in consumption cause a decline in the market value of collateral that in turn further reduces consumption. To mitigate this financial amplification mechanism, the government responds with large fiscal bailouts financed with risky external public debt. I show that this response then causes a sovereign debt crisis, characterized by high interest rate spreads and in some cases default. I find that the model is quantitatively consistent with the evolution of international private debt, international public debt, and sovereign spreads in Spain from 1999 to 2015. I estimate that private debt was 5% of GDP above the socially optimal level in the lead-up to the crisis. Private overborrowing increased the annual probability of a financial crisis by 2.4 percentage points. Finally, excessive private debt raised the interest rate spread on public bonds by at least 3.8 percentage points at its peak in 2012.

"A Macroprudential Theory of International Reserves," with Julien Bengui and Javier Bianchi

This paper proposes a theory of foreign reserves as macroprudential policy. We study an open economy model of financial crises, in which pecuniary externalities lead to overborrowing, and show that by accumulating international reserves, the government can achieve the constrained-efficient allocation. The optimal reserve accumulation policy leans against the wind and significantly reduces the exposure to financial crises. The theory is consistent with the joint dynamics of private and official capital flows, both over time and in the cross section, and can quantitatively account for the recent upward trend in international reserves.

"Optimal Redistribution in a Sudden Stop-Prone Economy," with Monica Tran Xuan

We explore the implications of household heterogeneity on the design and implementation of optimal macroprudential policies. We document that countries with higher levels of inequality exhibit higher levels of private borrowing and more recurrent sudden stop crisis. We develop a production economy where households are heterogeneous in their labor productivity and have access to international credit markets subject to a collateral constraint that depends on their market income. As a result, high income households also have a higher borrowing capacity. We study the implications of this mechanism for the choice of labor and borrowing taxes for a government who faces a trade-off between decreasing the probability of a sudden stop and redistributive concerns.