

# Mathias Jimenez

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EDUCATION	<b>Stanford University</b> Ph.D. Candidate, Department of Economics ( <i>Expected June 2022</i> ) <i>Dissertation Title: "Essays in Monetary Theory and History"</i> <i>Fields:</i> Macroeconomics, Finance.
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	<b>Universidad Torcuato Di Tella</b> Posgrado en Economía, 2015
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	<b>Universidad de Montevideo</b> Licenciatura en Economía, 2013
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RELEVANT SKILLS	Languages: Spanish (Native), English, Portuguese Programming: R, SQL, Matlab, $\text{\LaTeX}$ , Dynare, Markdown Software: QGIS, Eviews, Excel, Github Others: Statistical data analysis, causal inference, numerical optimization, time-series econometrics, financial asset pricing, financial forecasting, social network analysis, geographic information systems (GIS).
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PROFESSIONAL EXPERIENCE	<b>Internship at Adobe Inc.</b> <i>Location:</i> San Francisco, California. <i>Dates:</i> October 2017 – July 2018 ( <i>10 months</i> ) <i>Job Description:</i> Alongside a team at Stanford Economics and in partnership with the Adobe Digital Economy team, we leverage Adobe Analytics' real-time data coming from millions of e-commerce transactions to study firm pricing strategies across industries and online versus offline aggregate inflation dynamics.
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	<b>Project Manager at Credifast</b> <i>Location:</i> Montevideo, Uruguay. <i>Dates:</i> December 2012 – December 2013 ( <i>1 year</i> ) <i>Job Description:</i> I led a team in this micro-credit company to develop a new internal software solution for daily front-end and back-end use. It involved managing a developer, leveraging data pipelines for customized client balance statements, automatizing the credit approval process, and computing product offers using statistical risk analysis and financial math.
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	<b>Internship at Infopesca</b> <i>Location:</i> Montevideo, Uruguay. <i>Dates:</i> March 2010 – June 2010 ( <i>4 months</i> ) <i>Job Description:</i> I worked as a commercial analyst at Infopesca, a multilateral organization dedicated to producing reports on worldwide fishing markets and offering consultancy services for Latin American governments and private fishing industries. The job mainly consisted of working with a team to produce monthly market reports and maintain statistical information about worldwide fishing markets.
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## The Extent of Financial Fragility in Un-Regulated Banking Systems: Evidence from Canada, 1871-1913 (*Job Market Paper*)

**Abstract:** This paper challenges the conventional view that unregulated banking systems are “robust-but-fragile”, where banks provide valuable services during normal times but are also susceptible to a systemic run under financial stress. We use novel and granular data for Canada from 1871 to 1913, a period where there was no Central Bank, no currency monopoly, no deposit insurance, no explicit nor implicit bailout guarantees, no liquidity requirements, no mandatory public audits or inspections, and no public resolution authority. In this context, we show, among other things: i) The system evolved towards a handful of cooperative and well-diversified large banks, with no need for correspondent relationships. ii) Banks self-organized under an association that implemented centralized daily net clearing and settlement, liquidity management oversight, and rules for crises management and resolution. Moreover, the largest banks acted as ad-hoc central bankers by being lenders of last resort and making assume-and-purchase agreements with others at the brink of failure. iii) There were no system-wide runs even though Canada’s principal trading and financial partners (the US and UK) did have several. However, the system experienced some localized financial distress, and several bank failures were accompanied by fraud from top executives to both shareholders and creditors. The paper suggests that more work needs to be done in modern quantitative banking models to disentangle purely decentralized mechanisms from policy-induced microstructure. It also underscores the complexities in modeling and doing counterfactuals on path-dependent systems.

## Are Banks Technologically Obsolete? A New Monetarist Approach

**Abstract:** Given the current state of technology, which could allow agents to transfer directly Central Bank fiat money seamlessly and cheaply across the world, are we close to reaching a stage where private banks become “technologically obsolete”? To provide some insights about this question, we build a monetary search model with several “imperfections” in the medium-of-exchange (MOE), such as asymmetric information in its value, imperfect supply elasticity, and transportation costs. Banks are “experts” in this MOE and have access to a payment infrastructure that can facilitate payments among non-banks by issuing transferable debt. Our model is specifically designed to account for historical evidence on banking origins, innovations, and also to speculate about its future. We first show what we call the “Two Worlds” result, which allows us to partition the parameter space into two sub-spaces that speak to the relevance of banking in the competitive equilibrium. Our main result suggests that we might not be far away from private banks becoming obsolete technologically speaking. Formally, suppose we start from a parameterized model consistent with being in a “Banking World”. Then, even if the payment infrastructure endowed to banks is as good as it can get, agents in equilibrium strictly prefer to use only the MOE for payments when asymmetric information frictions and transportation costs vanish.

## The Life-Cycle of Banking

**(Short) Abstract:** This paper is the first to document the evolution of a banking system from the appearance of its first bank to maturity in terms of stable turnover dynamics. Specifically, we rely on multiple new historical sources for Canada from 1817 (when the Bank of Montreal was chartered) to 1931 (when the industry stabilized to just five large banks). These novel sources allow us to show the life-cycle of the competitive structure, branching expansion, portfolio choices, capital structure, financial network, turnover dynamics, and their interaction with trade routes, population settlement, economic development, and international financial crises.

RESEARCH AND  
TEACHING  
EXPERIENCE

**Research Assistant for Pete Klenow**

Summer 2017 – Summer 2018   Economic Growth

**Lecturer at Universidad Torcuato Di Tella**

Spring   2015   Introduction to Probability

**Teaching Assistant at Stanford University**

Spring   2020   Introduction to Financial Decision Making  
 Winter   2020   Games Developing Nations Play  
 Fall   2020   Finance, Corporations, and Society  
 Spring   2019   Economic Analysis III  
 Fall   2019   Economic Analysis I  
 Spring   2018   Economic Analysis III  
 Winter   2018   Economic Policy Seminar 101  
 Fall   2018   Economic Analysis III

**Teaching Assistant at Universidad Torcuato Di Tella**

Winter   2015   Statistical Inference (*Graduate*)  
 Fall   2015   Introduction to Probability (*Graduate*)

**Teaching Assistant at Universidad de Montevideo**

Spring   2013   TA Mathematical Economics II  
 Spring   2012   TA Mathematical Economics II  
 Winter   2012   TA Industrial Organization  
 Winter   2011   TA Statistics I  
 Spring   2011   TA Microeconomics I

COURSES

2021   Blockchain Technologies, Berkeley University edX  
 2021   Decentralized Finance (DeFi) Deep Dive, Duke University Coursera  
 2021   Bitcoin and Cryptocurrency Technologies, Princeton University Coursera.  
 2018   Princeton Initiative, Princeton University.  
 2018   Alternative Money University Workshop, CMFA.  
 2015   J-PAL's Short Course on Experimental and Quasi-Experimental Methods.

ACADEMIC AWARDS

2021 – 2022   Adam Smith Fellowship, Institute for Humane Studies.  
 2020 – 2021   Thomas C. & Irene W. Graham Fellow, Institute for Humane Studies.  
 2018   Full Scholarship for Alternative Money University Workshop, CMFA.  
 2017   Selected for Princeton Initiative 2017.  
 2016 – 2021   Stanford University School of Humanities and Sciences Fellowship.  
 2015   Full Grant for J-PAL's Short Course on Experimental and Quasi-Experimental Methods, Universidad Torcuato Di Tella.

OTHER AWARDS

2006   Bronze medal, 2006 International Basketball Championship, Uruguayan juvenile basketball National Team.  
 2004   Silver medal, 2004 Uruguayan juvenile National League.