Francisco A. Ruela Jr.

FranciscoARuela@gmail.com · franciscoruelajr

Education

University of Chicago Chicago, IL
Finance, PhD Student

Boston College Chestnut Hill, MA
Economics, BA with Honors; Mathematics, BS

Research Experience

Federal Reserve Bank of New York New York, NY
Senior Research Analyst Jul 2018 | July 2021

- Conducted research with economists Michael Fleming, Moritz Schularick, and Fernando Duarte for publication in academic journals and the Liberty Street Economics blog (official blog of the Bank's Research and Statistics Group).
- Work products presented to FOMC Chair Powell, Treasury Secretary Mnuchin, SEC Chair Clayton, and FRBNY President Williams.
- Maintained and updated a record of every BrokerTec trade and limit order book instance derived from raw message scripts; dataset is utilized across the Federal Reserve System. Regularly work with raw data to generate liquidity statistics for use in research papers and policy products.
- Assisted in recruitment process planing and execution for summer and full time analysts.

Summer Analyst Jun 2017 | Aug 2017

- Assisted economist Or Shachar by constructing and cleaning data as well as conducting preliminary analysis using quantile regressions on market volatility and mutual fund liquidity.

Boston College Carroll School of Management Chestnut Hill, MA
Undergraduate Research Fellow Oct 2017 | May 2018

- Assisted Professor Edith Hotchkiss with ongoing research focused on corporate finance by using Capital IQ to compare contract conditions of failed and successful mergers.

Center for Retirement Research Chestnut Hill, MA
Undergraduate Research Assistant Jun 2016 | Sept 2016

- Conducted literature reviews and data analysis focused on retirement policy, including an analysis of retirement benefits recorded by the Survey of Consumer Finance.

Publications (blue text is hyperlinked)

Tick Size Change and Market Quality in the U.S. Treasury Market 2022
With Michael Fleming and Giang Nguyen Management Science (forthcoming)

- Investigate the effects of the 2018 BrokerTec tick-size reduction on treasury market liquidity.
- Used SQL for initial data processing. Used Stata and Matlab for main analysis.
- Summary blog post on Liberty Street Economics. Cited by Bloomberg.

Working Papers & Blog Posts

The Impact of Child Earnings on Retirement Expectations 2018
Advised by Geoffrey Sanzenbacher Working Paper, Senior Thesis

- Awarded Giffuni Prize for Outstanding Thesis in Economics (at Boston College).
- Analyze the impact of child earnings and earnings shocks on the retirement expectations of the parent using the Health and Retirement Study (HRS) with Stata.

How Liquid Is the New 20-Year Treasury Bond? 2020
With Michael Fleming FRBNY Blog Post

- Assess the liquidity of the new 20-Year Bond using limit orderbook data from BrokerTec.
- Initial data processing in Python, C. Final aggregation and analysis in Stata.

Treasury Market Liquidity during the COVID-19 Crisis 2020

With Michael Fleming FRBNY Blog Post

- Evaluate the severity of the COVID-19 crisis compared to the Global Financial crisis using over 15 years of limit orderbook data from BrokerTec. Cited by Zhiguo He, Stefan Nagel, and Zhaogang Song and Darrell Duffie. Discussed by John Cochrane.
- Initial data processing in Python, C. Final aggregation and analysis in Stata.

How Large Are Default Spillovers in the U.S. Financial System? 2019

With Fernando Duarte and Collin Jones FRBNY Blog Post

- Gauge the health of the US financial system using an Eisenberg and Noe network.
- Used Matlab with Knitro (3rd party optimization package) for network optimization analysis. Used Stata and Python for data aggregation and formatting.

Assessing Contagion Risk in a Financial Network 2019

With Fernando Duarte and Collin Jones FRBNY Blog Post

- Explain the framework and applications of an Eisenberg and Noe network.

Notable RA Contributions (* in progress or uncredited)

Adrian, Tobias and Fleming, Michael and Vogt, Erik, An Index of Treasury Market Liquidity: 1991-2020 (2020). *Federal Reserve Bank of New York Staff Report No. 827.**

Adrian, Tobias and Capponi, Agostino and Fleming, Michael J. and Vogt, Erik and Zhang, Hongzhong, Intraday Market Making with Overnight Inventory Costs (2020, Lead Article). *Journal of Financial Markets.*

Bartscher, Alina and Kuhn, Moritz and Schularick, Moritz and Wachtel, Paul, Monetary Policy and Racial Inequality (2021). *Federal Reserve Bank of New York Staff Report No. 959.*

Board of Governors of the Federal Reserve System (2019), *Financial Stability Report - November 2019.**

Boyarchenko, Nina and Giannone, Domenico and Shachar, Or, Flighty Liquidity (2018). *Federal Reserve Bank of New York Staff Report No. 870.*

Duarte, Fernando and Eisenbach, Thomas M., Fire-sale Spillovers and Systemic Risk (Forthcoming). *Journal of Finance.*

Duarte, Fernando and Jones, Collin, Empirical Network Contagion for U.S. Financial Institutions (2017). *Federal Reserve Bank of New York Staff Report No. 826.**

Nguyen, Giang and Engle, Robert F. and Fleming, Michael J. and Ghysels, Eric, Liquidity and Volatility in the U.S. Treasury Market (2020). *Journal of Econometrics.*

Leadership Experience

Education For Students By Students Chestnut Hill, MA

Teacher Jan 2017 | Apr 2018

- Developed and taught three economics/finance classes to high school students in the Spring 2017, Fall 2017, and Spring 2018 Boston College Splash programs.

TEDxBostonCollege Chestnut Hill, MA

Executive Producer, Co-Founder Jan 2017 | Apr 2018

- Led all production and planning for the day of the event. Oversaw all of the roles related to content production, stage management, technology, and video.

The Heights, Independent Student Newspaper Chestnut Hill, MA

Multimedia Editor Dec 2016 | Dec 2017

Assistant Online Editor Apr 2016 | Dec 2016

Assistant Graphics Editor Dec 2014 | Dec 2015

Programing Experience:

Advanced: LaTeX, MATLAB, Stata, SQL

Familiar: C, Python, R, SAS, VBA

Accolades

Graduate Research Fellowship National Science Foundation

Awarded in the "Social Science - Economics" field 2021-

Vault Propel Award Federal Reserve Bank of New York

For contributions to policy work 2019

Giffuni Prize Boston College Economics Department

For outstanding thesis in economics 2018

Pacemaker: Multimedia Story of the Year Associated Collegiate Press

Shared with co-author Michael Sullivan 2017