

Purdue University
Krannert School of Management
403 W. State Street
West Lafayette, IN 47907

Office: 509 KRAN
Email: dejanir@purdue.edu
<http://www.dejanirsilva.com>

Academic Positions

Assistant Professor of Finance, Purdue University, 2021 – present
Assistant Professor of Finance, University of Illinois at Urbana-Champaign, 2017 – 2021
Lecturer, Princeton University, Bendheim Center for Finance, 2016 – 2017

Research Interests

Macro Finance, Asset Pricing, Financial Intermediation

Education

Ph.D. in Economics, Massachusetts Institute of Technology, 2016
Thesis advisors: Robert Townsend, Iván Werning, Alp Simsek, and Leonid Kogan
MSc. in Economics, University of São Paulo (USP), 2011
BSc. in Economics, University of São Paulo (USP), 2008

Published or Accepted Papers

Under-diversification and Idiosyncratic Risk Externalities, with Felipe Iachan and Chao Zi

Journal of Financial Economics, accepted for publication

Winner of best finance paper at the SBE meeting (2019)

We study the effects of idiosyncratic uncertainty on asset prices, investment, and welfare. We consider an economy with two main components: i) under-diversification and ii) endogenous and countercyclical idiosyncratic risk. The equilibrium is subject to underinvestment and excessive aggregate risk-taking. Inefficiencies stem from an idiosyncratic risk externality, as firms do not internalize the effect of their investment decisions on the risk borne by others. Risk externalities depend on an idiosyncratic risk premium and a variance risk premium. We assess their magnitude empirically. The optimal allocation can be implemented through financial regulation using a tax benefit on debt and risk-weighted capital requirements.

Working Papers

The Risk Channel of Unconventional Monetary Policy

Review of Financial Studies, revise and resubmit

This paper examines how unconventional monetary policy affects asset prices and macroeconomic conditions by reallocating risk in the economy. I consider an environment with two main ingredients: heterogeneity in risk tolerance and frictions in portfolio adjustment. Risk-tolerant investors take leveraged positions, exposing the economy to balance-sheet recessions. The central bank's balance sheet is non-neutral due to the presence of passive investors. Unconventional monetary policy reduces the risk premium and endogenous volatility. Asset purchases boost investment and growth during crisis, but reduce them during normal times. The intervention reduces risk-taking by leveraged institutions. As risk concentration falls, the probability of negative tail-events is

reduced, enhancing financial stability. Under the optimal policy, the central bank should increase its exposure to risk, which is inconsistent with increase in holdings of long-term government bonds.

Optimal Fiscal Consolidation under Frictional Financial Markets

Economic Journal, revise and resubmit

This paper studies optimal fiscal policy in a currency union subject to capital flow shocks. I consider an economy with two main ingredients: i) sticky prices and ii) financially constrained international arbitrageurs. Given capital outflows and high external debt, the fiscal authority faces a trade-off between stimulating the economy or paying off the external debt to reduce sovereign spreads. I find that it is *not* optimal to use government spending to stimulate the economy. The planner reduces the VAT in the short-run and increases it over time. It is optimal to raise and front-load the sum of the VAT and payroll tax, in contrast with fiscal devaluation proposals. The country engages in a fiscal consolidation, as government debt falls compared with a passive fiscal policy.

Liquidity and Risk in OTC Markets: A Theory of Asset Pricing and Portfolio Flows, with Mahyar Kargar and Juan Passadore

We develop an asset-pricing model with heterogeneous investors, search frictions, and wealth effects. Trade is intermediated by risk-neutral dealers subject to capacity constraints. Risk-averse investors can direct their search towards dealers based on price and execution speed. Order flows affect the risk premium, volatility, and equilibrium interest rate. We propose a new solution method to characterize the equilibrium analytically. We assess the quantitative implications of the model in response to a large adverse shock. Consistent with the empirical evidence from the COVID-19 crisis, we find an increase in the risk premium and market illiquidity, and a decline in interest rates.

Monetary Policy and Wealth Effects: The Role of Risk and Heterogeneity, with Nicolas Caramp

Under review

We study the role of wealth effects, i.e. the revaluation of real and financial assets, in the monetary policy transmission mechanism. We build an analytical heterogeneous-agents model with two main ingredients: i) rare disasters and ii) risky household debt. The model captures time-varying risk premia and precautionary savings in a linearized setting that nests the textbook New Keynesian model. Quantitatively, the model matches the empirical response of asset prices and the heterogeneous impact on borrowers and savers. We find that wealth effects induced by time-varying risk and household debt account for the bulk of the output response to monetary policy. Defaultable private debt amplifies the effects of monetary policy, but the effect decreases with its duration. Controlling for the fiscal response to a monetary shock is crucial for the quantitative results.

Risk-taking over the Life Cycle: Aggregate and Distributive Implications of Entrepreneurial Risk, with Robert Townsend

We study the risk-taking behavior of entrepreneurs over the life cycle in the presence of limited idiosyncratic insurance. The model is able to quantitatively account for the levels of aggregate and idiosyncratic risk premium, the patterns of inequality, and the life cycle profiles observed in the data. A relaxation of risk constraints leads to a reduction in the idiosyncratic risk premium and an investment boom. Consistent with a Kuznets curve, inequality increases in the short-run, but it declines in the long-run. The initial generation of entrepreneurs benefits from better insurance, but future generations of entrepreneurs are worse-off after the reform.

Research in Progress

Dissecting the Aggregate Market Elasticity, with Victor Duarte and Mahyar Kargar

Teaching Experience

University of Illinois at Urbana-Champaign

Advances in Asset Pricing, PhD

Investments, Undergraduate/Master of Science in Finance

Macrofinance, Master of Science in Finance

Princeton University

Asset Pricing I, Master in Finance

Money and Banking, Undergraduate

Fellowships, Honors, and Awards

Macro Financial Modelling Group, Dissertation Fellowship, 2014-2015
Graduate Fellowship, Department of Economics, MIT, 2011-2013
Ryoichi Sasakawa Young Leaders Fellowship, 2011
FAPESP Fellowship, 2010
CNPq Scholarship, Msc in Economics, 2009
First place in the National Graduate Admission Exam (ANPEC)

Presentations

2021 (including scheduled): SFS Cavalcade, Society for Economic Dynamics (SED), Western Finance Association (WFA), Eastern Finance Association (EFA), John Hopkins Carey, SAMMF, UIUC, NBER Summer Institute, Nova Summer School (discussant), World Finance Conference, American Real Estate and Urban Economics Association (AREUA) meeting (discussant), Brazil Central Bank, Stanford Institute for Theoretical Economics (SITE), UFPE.
2020: IMF, UCLA Anderson, Western Finance Association (discussant), Barcelona GSE Summer Forum (ADEMU), Midwest Finance Association (discussant), FGV, Insper, Liquidity and Macroeconomics workshop (UC Davis)
2019: Fed Dallas, EPGE, ITAM Finance Conference (discussant), LuBraFin, Society of Economics Dynamics, Western Finance Association, EIEF, Brazilian Econometric Society (SBE), UIUC
2018: Bank of Portugal, PUC Chile, PUC Rio. Barcelona GSE Summer Forum, Econometric Society (American Meeting) (2x), Econometric Society (European Meeting), Society of Economics Dynamics (2x), EIEF (Rome)
2017: Gerzensee Conference, LuBraMacro, MFM Meeting, Philadelphia Fed, Richmond Fed, Princeton
2016: UIUC Finance, UChicago Booth, FED Board, Princeton, PUC-RJ, EPGE, Insper, FGV-SP. LuBraMacro, LACEA-LAMES, UCLA
2015: MIT, MFM Meeting (NYU Stern), USP

Conference Discussions

Krishnamurthy and Li, “Dissecting Mechanisms of Financial Crises: Intermediation and Sentiment”
Gorton and Ordoñez, “The Supply and Demand for Safe Assets”
Bolton, Li, Wang, and Yang, “Dynamic Banking and the Value of Deposits”
Bigio and Zilberman, “Heterogeneous Beliefs and Business Cycles”
Yu, Fangyan, “Dynamic Adverse Selection and Asset Sales”
Reis, Ricardo, “The Constraint on Public Debt When $r < g$ but $g < m$ ”
D’Acunto, Malmendier, Ospina, and Weber, “Exposure to Daily Price Changes and Inflation Expectations”
Schneider, “Financial Intermediaries and the Yield Curve”
Croce, Jahan-Parvar, and Rosen, “SONOMA: a Small Open ecoNOmy for MACrofinance”
Clara, “Demand Elasticities, Nominal Rigidities and Asset Prices”
Chari, Nicolini, and Teles, “Ramsey Taxation in the Open Economy”

Professional Services

Program Committee: Western Finance Association (WFA), European Finance Association (EFA)
Junior Associate Editor: Journal of Mathematical Economics

Personal Information

Born: March 9, 1984. Brazilian Citizen (U.S. Permanent Resident). Married with two children.