

Murilo Silva

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EDUCATION

Ph.D., Economics, University of California, Riverside (expected completion June 2025)
M.S., Economics, Federal University of Santa Catarina, Brazil, 2020
B.S., Economics, Federal University of Ceara, Brazil, 2017

FIELDS OF INTEREST

Macroeconomics, Finance, Applied Econometrics, Climate Change

JOB MARKET PAPER

“Climate Disaster Risk and Stock Returns” ([link](#))

This paper investigates whether climate disaster risk is priced in the cross-section of U.S. stock returns. I construct national and state-level climate disaster indices for the Contiguous United States based on the physical strength of acute climate hazards (storms, floods, droughts, and heatwaves). These indices are used to estimate stock return covariance with physical climate risk, which leads to finding that safer stocks, those with a higher climate disaster beta, earn lower future returns. In particular, this negative relation between climate disaster beta and future returns becomes more pronounced following times of heightened disaster risk. This paper further shows that geographically dispersed business operations and high cash holdings pay off when the market is concerned about climate change risk. These findings are consistent with the risk-return tradeoff and the asset pricing implications of demand for stocks with high potential to hedge against climate risk.

JOURNAL PUBLICATIONS

“The Brazilian granular business cycle” ([link](#)) with Sergio Da Silva, *Economics Bulletin* (2020)

“A power law in the ordering of the elements of the periodic table” ([link](#)) with Sergio Da Silva, Raul Matsushita, *Physica A* (2020)

“The Impact of Monetary Policy in Banks Balance Sheets: Evidence for Brazil (in Portuguese)” ([link](#)) with Alexandre Schwinden Garcia, Roberto Meurer, *Revista Brasileira de Economia de Empresas (Brazilian Journal of Business Economics)* (2019)

“Regressive Prediction is the Best Way to Forecast Sports Outcomes: Evidence from Brazilian Soccer” ([link](#)) with Sergio Da Silva, *Open Access Library Journal* (2019)

RESEARCH IN PROGRESS

“Fifty Shades of Green: Central Bank Communication About Climate Change and Inflation Expectations” with Jana Grittersova, Eleonora Mavroedi

This study explores how central banks discuss climate change and whether such communication affects the behavior and expectations of financial markets. Specifically, it examines whether the frequency of central bank communication on climate-related risks influences the inflation expectations of financial markets. Central bank communication about climate change can influence these expectations by creating uncertainty about future climate policies that the central bank might adopt. When a central bank incorporates climate objectives into its policy discourse, it creates uncertainty among financial market participants about its commitment to its mandates, such as maintaining price stability and safeguarding central bank autonomy. There is also the concern that the central bank could be perceived as the last resort to rescue the financial system in the face of climate-induced risks. To investigate this, we compiled a novel and comprehensive database of speeches addressing climate change by representatives of the European Central Bank and national central banks of the eurozone countries from January 2008 to December 2022. This dataset enables us to examine how central bankers’ speeches influence private inflation expectations, as measured by market-based indicators. Using local projections, we find that more frequent speeches on climate change and higher intensity of climate-related language within speeches are associated with increased inflation expectations among financial market participants across various maturity horizons, spanning from one year to ten years. Moreover, we found that the effect of these speeches varies depending on the speaker; notably, speeches delivered by representatives of central banks from the founding members of the eurozone influence shifts in inflation expectations. This holds even when accounting for macroeconomic surprises, central bank interest rate decisions, and alternative estimation methods. Our findings suggest that central bank discourse on climate change offers valuable insights into future financial market inflation expectations.

“Evolving Extreme Weather in Europe: Determinants and Economic Impact” with Marcelle Chauvet, Claudio Morana

This paper investigates the linkage between deteriorating extreme weather conditions and anthropogenic GHG emissions and their economic impact on 40 European countries. The analysis employs the European Extreme Events Climate Index (E3CI) and its seven subcomponents, i.e., extreme maximum and minimum temperatures, wind speed, precipitation, droughts, wildfires, and hail. Using an innovative panel regression-based trend-cycle decomposition approach, we find support for the contribution of human-made GHG emissions to the deterioration of underlying extreme weather conditions and their highly nonlinear pattern. We then conduct a Growth-at-Risk analysis within a quantile panel regression framework to assess the economic implications of our findings. We show that deteriorating extreme weather conditions, as measured by the E3CI index, negatively impact the entire GDP growth rate distribution. Yet the impact on the downside risk to growth is much more substantial than the upside risk. This result holds for various E3CI components, such as rising extreme maximum temperature, wind speed, drought, and wildfires.

FELLOWSHIPS, PRESENTATIONS, AND AWARDS

2025: Dissertation Completion Fellowship Award, UC Riverside
2024: Workshop Energy Transition and Climate Change (local organizer and presenter)
2024: Outstanding Teaching Assistant Award, UC Riverside
2020: Dean's Distinguished Fellowship, UC Riverside (2020-2023)
2018: Masters Fellowship, CAPES, Ministry of Education, Brazil

TEACHING

Instructor, UC Riverside

Intermediate Macroeconomics, *Summer 2024*

Managerial Economics, *Summer 2024*

Industrial Organization, *Summer 2023*

Introduction to Microeconomics, *Summer 2022*

Teaching Assistant, UC Riverside

Macroeconomic Theory (Graduate level), *Winter 2023*

Intermediate Macroeconomics, *Spring 2022, Fall 2022, Spring 2023, Fall 2023*

Stock Market, *Spring 2024, Fall 2024*

Statistics for Economics, *Summer 2022*

Introduction to Macroeconomics, *Fall 2021, Winter 2022*

Introduction to Microeconomics, *Winter 2024*

TECHNICAL SKILLS

Python, R, Stata, MATLAB, WRDS, OxMetrics, EViews, Microsoft Office, LaTeX

REFERENCES

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