Research Statement

My theoretical and empirical research is in corporate finance, climate finance, and international finance.

**Environmental Corporate Finance**

My research in corporate finance and climate finance focuses on understanding effective strategies for aligning firm interests with the reduction of greenhouse gasses and the ability to econometrically test for the climate impacts of these strategies.

My job market paper is motivated by the question of whether pressuring publicly traded companies to decarbonize is effective when there is trading in assets. Recent sales of high greenhouse gas emitting assets by publicly traded firms to privately held firms raise two concerns. The first is that such pressure has zero or negative climate impacts. The argument is that by shifting ownership to privately held firms that are subject to less public scrutiny, assets will be operated in more emissions-intense ways. The second concern is that the publicly traded firms that sell their assets are being financially rewarded for such sales.

In response to these concerns, I empirically estimate the climate and valuation consequences of divestitures by publicly traded firms to privately held firms in 2002-2020 in the fossil-fuel power plant sector, which accounts for a quarter of U.S. annual emissions.

Using a difference-in-difference (DD) design, I find that in my sample, divestitures to privately held firms had near zero impacts on individual asset and aggregate emissions and that the post-divestment effects of units divested to privately held firms were statistically indistinguishable from those divested to publicly held firms. This finding casts doubt on ESG investor strategies that stress divestment as a way to reduce aggregate emissions. I also reject the null that in my sample, publicly traded firms that sold assets were systematically financially rewarded for announcing divestments.

I then present a simple model of firm production and emissions in which publicly traded firms, but not privately held firms, experience a shock to their private costs of emitting. I show that there exists a “brown-spinning equilibrium” in which publicly traded firms express the shock entirely through ownership decisions: they sell to privately held firms and assets emit just as they would have pre-shock.

I have two ongoing projects in this area. The first is a project extending the theoretical results presented in my job market paper by identifying equilibria under which we can or cannot econometrically test for the climate impacts of these strategies using DD estimators. The second is a theoretical and empirical project with a PhD student from MIT’s Institute for Data, Systems, and Society, Thomas Lee, studying the conditions under which a popular policy for greening electricity battery arbitrage–compensating batteries for the marginal emissions (ME) they take off the grid–increases, decreases, or has no effect on aggregate emissions from electricity generation.

**International Finance**

My research in international finance has centered on measuring and understanding the U.S. Treasury premium. In the paper “U.S. Treasury Premium” (*Journal of International Economics*, 2018), Wenxin Du, Jesse Schreger, and I define the U.S. Treasury premium as the deviation from [covered interest parity](https://www.sciencedirect.com/topics/economics-econometrics-and-finance/interest-rate-parity) of government bond yields in advanced economies vis-à-vis those in the U.S. and document a secular decline in this measure at medium to long maturities. We show that the premium cannot be explained away by differential sovereign credit risk or FX market frictions and that increases in foreign country debt-to-GDP ratios are associated with a higher U.S. Treasury premium. This supports the notion that premiums are driven by the relative scarcity of sovereign debt in the U.S. vis-à-vis other countries in the sample.

In the future, I plan to conduct research on effective strategies for aligning corporate behavior with the mitigation of climate change and its harms and the implications of climate change on asset prices.