STEVEN ZHENG

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Education

Columbia University and **New York University** — New York, NY
PhD coursework in Finance and Economics — 2018–2019

Georgetown University — Washington, DC
MS Mathematics — 2016–2018
BS Mathematics and Economics — 2012–2016
NCAA Division I swim team member

University of British Columbia — Vancouver, Canada
Dual-enrollment during high school — 2011–2012

Research Interests

Asset pricing, macroeconomics, international finance

Working Papers

The Value of a Cure: An Asset Pricing Perspective
(with Viral Acharya, Timothy Johnson and Suresh Sundaresan)

We provide an estimate of the value of a cure using the joint behavior of stock prices and a vaccine progress indicator during the ongoing COVID-19 pandemic. Our indicator is based on the chronology of stage-by-stage progress of individual vaccines and related news. We construct a general equilibrium regime-switching model of repeated pandemics and stages of vaccine progress wherein the representative agent withdraws labor and alters consumption endogenously to mitigate health risk. The value of a cure in the resulting asset-pricing framework is intimately linked to the relative labor supply across states. The observed stock market response to vaccine progress serves to identify this quantity, allowing us to use the model to estimate the economy-wide welfare gain that would be attributable to a cure. In our estimation, and with standard preference parameters, the value of the ability to end the pandemic is worth 5-15% of total wealth. This value rises substantially when there is uncertainty about the frequency and duration of pandemics. Agents place almost as much value on the ability to resolve the uncertainty as they do on the value of the cure itself. This effect is stronger – not weaker – when agents have a preference for later resolution of uncertainty. The policy implication is that understanding the fundamental biological and social determinants of future pandemics may be as important as resolving the immediate crisis.

Work in Progress

Hedging Uncertainty

I estimate the price of hedging against uncertainty shocks. I use macro and financial uncertainty from Jurado, Ludvigson and Ng (2015), and start by employing their and Bloom (2009)'s vector autoregression (VAR) to show shocks to both types of uncertainty result in sharp and persistent declines across the market portfolio and real economic quantities. I then construct hedge portfolios following Herskovic, Moreira and Muir (2020). While they show standard risk factors can be successfully hedged with minimal cost, I find that hedging against uncertainty shocks requires an economically meaningful cost of 3 to 4% per year. Finally I estimate an uncertainty factor and the resulting mimicking portfolio outperforms in times of heightened uncertainty.

Research Experience	**New York University**	New York, NY
	Research assistant for Viral Acharya, Toomas Laarits, Robert Richmond	2019–2021
	BlackRock	New York, NY
	Macro Research	2018–2019
	JP Morgan	New York, NY
	Interest Rate Derivatives Research	2017
	Goldman Sachs	New York, NY
	Global Macro Research	2016
Teaching Experience	**Probability Theory and Applications** (MS)	Georgetown
	Teaching assistant for David Caraballo	2016
	Economic Statistics (Undergraduate)	Georgetown
	Teaching assistant for Anil Nathan	2016
	International Trade (Undergraduate)	Georgetown
	Teaching assistant for Carol Rogers	2014–2015

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