Sangmin S. Oh

CONTACT INFORMATION
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RESEARCH INTERESTS
Machine learning applications in finance
Effect of social norms on economic and financial outcomes

EDUCATION

The University of Chicago Expected May 2023
PhD Student – Joint Program in Financial Economics

University of Pennsylvania, M&T Dual-Degree Program May 2018
M.S. in Electrical Engineering, School of Engineering and Applied Science
B.S. in Electrical Engineering, School of Engineering and Applied Science
B.S. in Economics, Wharton School

References:

Ralph Koijen
Booth School of Business
The University of Chicago
ralph.koijen@chicagobooth.edu

Stefan Nagel
Booth School of Business
The University of Chicago
stefan.nagel@chicagobooth.edu

PAPERS

Working Papers:

1. Cross-Sectional Skewness with Jessica Wachter
2. *High-Frequency Expectations from Asset Prices: A Reinforcement Learning Approach* with Aditya Chaudhry

RELEVANT COURSEWORK

Financial Economics:
Asset Pricing I & II, Corporate Finance I & II, Theory of Financial Decisions, Continuous-time Asset Pricing

Other Electives:
Industrial Organization I, New Developments in Public Finance

ACTIVITIES

Presentations *(* Indicates presentation by co-author)*

- 2020: Chicago Booth Finance Brownbag | Midwest Finance Association | SFS NA Cavalcade
- 2019: JHU Carey Conference* | Chicago Booth Finance Brownbag

Invited Workshops

- 2020: NBER Asset Pricing | NBER Financial Economics of Insurance | BFI MFR Summer Session
- 2019: Princeton Insurance Workshop

TEACHING

The University of Chicago, Booth School of Business
Teaching Assistant:
MBA – Quantitative Portfolio Management, Ralph Koijen (Winter 2020)
MBA – Big Data, Veronika Rockova (Spring 2020)
MBA – International Macro, Brent Neiman (Fall 2020, Scheduled)

Last updated: April 2020

Statement of Interest

Sangmin S. Oh*

May 4, 2020

I am a rising third-year PhD student in the Joint Program in Financial Economics at University of Chicago's Booth School of Business. My research interests in artificial intelligence are twofold.

First, I am interested in using machine learning to better measure and understand decisions of economic agents. For example, my current working paper "High-Frequency Expectations from Asset Prices: A Reinforcement Learning Approach" with Aditya Chaudhry uses reinforcement learning to measure aggregate growth expectations at a daily frequency. In future work, I am interested in modeling economic agents as machine-learners and examining their effects on the macro-economy.[1]

Second, I am interested in how A.I. shifts our understanding of liability and how it impacts the broad financial sector. Currently, there is significant uncertainty regarding how legal rules should apply to liability for losses caused by AI systems. This legal uncertainty has great ramifications for how insurance companies estimate their payouts, how investors price the cash flow of assets, and how banks assess the cost of capital in their lending decisions.

My general interest in artificial intelligence is not new. Having grown up in South Korea, I witnessed aggressive government policies aimed at fostering A.I. as well as active debates on digital privacy. My undergraduate education in engineering further enhanced my interest in the design of machine learning algorithms and its social ramifications. At the PhD workshop, I wish to engage in active discussions that will not only develop my current interests but also expand my research scope within the realm of A.I.

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[1]For example, Martin and Nagel (2019) derive implications for market efficiency when investors use machine learning to address the high-dimensional prediction problem.