Dapeng Shang

Education

Boston University, Questrom School of Business 2018 – 2024

Ph.D. in Mathematical Finance

Research Area: Asset Pricing, Macro Finance, Market Structure, Robust Optimization

University of Michigan 2015 – 2017

M.S. in Applied Statistics

M.S. in Quantitative Finance and Risk Management

Shandong University 2011 – 2015

Bachelor in Economics

Visiting Student in Economics Department at University of California, Berkeley

Working Experience

Principal Quantitative Analyst. Capital One McLean, VA, Current

Quantitative Risk Intern. Schonfeld Miami, FL, 2023

Quantitative Analyst. Invesco Great Wall Fund Management Co. Shenzhen, China, 2017

Publication

Inventory Management for High-Frequency Trading With Imperfect Competition
(with S. Herrmann, J. Muhle-Karbe, and C. Yang)
SIAM Journal on Financial Mathematics, Vol. 11 (2020), No. 1, pp. 1-26.

Working Papers

Option Implied Risk Information on Macroeconomic Announcements

This paper constructs a novel measure to assess the impact of macro announcements on investors' risk expectations using S&P500 index and Treasury future options. This measure corrects the systematic downward bias in the option-implied variance measure and isolates innovations of investors' risk expectations after macro-announcements. Applied to key economic releases, including FOMC meetings, GDP, PPI, and Employment data announcements, this measure reveals that macro announcements significantly increase investors' risk expectations compared to pre-announcement levels. Furthermore, I show that investor sentiment significantly declines following macro-announcements with heightened risk expectations.

Robust Portfolio and Dynamic Disaster Risk
(with H. Xing and P. Maenhout)

This paper explores the effect of disaster risk on the beliefs and portfolio choices of ambiguity-averse agents. With the introduction of Cressie-Read discrepancies, a time-varying pessimism state variable arises endogenously, generating time-varying disaster risk. In the event of a disaster, agents heighten

their pessimism, anticipating subsequent disasters to arrive sooner. Within this framework, we deduce optimal consumption and portfolio choices that are robust to model misspecification. Additionally, our measure of pessimism aids in understanding the stylized facts derived from Vanguard's retail investor survey data, as reported in Giglio et al. (2021).

Fellowship & Grants

Doctoral Fellowship, *Questrom School of Business*, Boston University

Travel Grant, *MFR Summer Session for Young Scholar*, University of Chicago

Teaching Experience

Teaching Assistant at Questrom School of Business

Undergraduate

MF 459: Computational Techniques for Finance	2021

Graduate (MSMFT & MBA Program)

MF 728: Fixed Income Securities	2022-2024
MF 810: FinTech Programming	2021, 2024
MF 850: Deep Learning and Statistical Learning	2020-2023
MF 796: Computational Methods of Mathematical Finance	2020
FE 829: Futures, Options and Financial Risk Management	2019
MF 703: Programming for Mathematical Finance	2018 - 2019

Skills

Languages : English (fluent), Mandarin (native)

Computer Skills : Python, Matlab, R, C++, SQL, Spark, LaTeX, Git